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ABSTRACT

The report reviews home visiting as an early intervention strategy to provide health, social, education, or other services to improve maternal and child health and well-being. The report describes: (1) the nature and scope of existing home-visiting programs in the United States and Europe; (2) the effectiveness of home visiting; (3) strategies critical to the design of programs that use home visiting; and (4) federal options in using home visiting. Among conclusions concerning effectiveness are various lasting indicators of improved child well-being and development, and reduced need for more costly services. Critical program design components such as developing and utilizing clear program objectives are identified. Improved federal coordination is encouraged, as is Congress's consideration of amending Title XIX of the Social Security Act to provide home visiting services for high-risk mothers and infants as an optional Medicaid service. Recommendations to the Secretaries of Health and Human Services and of Education include: making existing materials on home visiting more widely available; encouraging the systematic evaluation of costs and benefits associated with home visiting services, and charging the Federal Interagency Coordinating Council with coordinating home-visiting initiatives. Five appendixes include a description of programs visited and comments on the report. (DB)

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United States General Accounting Office

GAO

Report to the Chairman, Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, Committee on Appropriations, U.S. Senate

July 1990

HOME VISITING

A Promising Early Intervention Strategy for At-Risk Families

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United States
General Accounting Office
Washington, D.C. 20548

Comptroller General
of the United States

B-238394

July 11, 1990

The Honorable Tom Harkin
Chairman, Subcommittee on Labor, Health and Human
Services, Education, and Related Agencies
Committee on Appropriations
United States Senate

Dear Mr. Chairman:

This report, prepared at the Subcommittee's request, reviews home visiting as an early intervention strategy to provide health, social, educational, or other services to improve maternal and child health and well-being.

The report describes (1) the nature and scope of existing home-visiting programs in the United States and Europe, (2) the effectiveness of home visiting, (3) strategies critical to the design of programs that use home visiting, and (4) federal options in using home visiting.

This report contains a matter for consideration by the Congress and recommendations to the Secretaries of Health and Human Services and Education.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to the Secretaries of Health and Human Services and Education and to interested parties and make copies available to others upon request.

This report was prepared under the direction of Linda G. Morra, Director, Intergovernmental and Management Issues, who may be reached on 275-1655 if you or your staff have any questions. Other major contributors to this report are listed in appendix V.

Sincerely yours,

Charles A. Bowsher

Charles A. Bowsher
Comptroller General
of the United States

Executive Summary

Purpose

Families that are poor, uneducated, or headed by teenage parents often face barriers to getting the health care or social support services they need. Many experts believe that an effective way to reduce barriers is to deliver such services directly in the home. This is known as home visiting. They also believe that using home visiting to deliver or improve access to early intervention services—prenatal counseling, parenting instruction for young mothers, and preschool education—can address problems before they become irreversible or extremely costly.

Is home visiting an effective service delivery strategy? What are the characteristics of programs that use home visiting? Are there opportunities to expand the use of home visiting? The Senate Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies asked GAO to answer these questions.

Background

Home visitors have worked with families in the United States and Europe for more than 100 years. In-home services began when public health officials recognized that proper prenatal and infant care could reduce infant deaths. Home visitors provide a variety of services—prenatal visits, health education, parenting education, home-based preschool, and referrals to other agencies and services.

While home visiting can also be used to deliver services to the chronically ill and the elderly, this report focuses on delivering early intervention services to at-risk families with young children. For this study, GAO reviewed the home-visiting literature; interviewed international, federal, state, and local program officials and other experts in medical, social, and educational service delivery; and reviewed eight programs in the United States, Great Britain, and Denmark that used home visiting.

Results in Brief

Home visiting is a promising strategy for delivering or improving access to early intervention services that can help at-risk families become healthier and more self-sufficient. Evaluations have demonstrated that such services are particularly useful when families both face barriers to needed services and are at risk of such poor outcomes as low birthweight, child abuse and neglect, school failure, and welfare dependency. While few cost studies of home visiting have been done, they have shown that delivering preventive services through home visiting can reduce later serious and costly problems. But the cost-effectiveness of home visiting, compared to other strategies to provide early intervention services, has not been well researched.

Not all programs that use home visiting have met their objectives. Success depends on a program's design and operation. Well-designed programs share several critical components that enhance their chances of success. Home visiting does not stand alone; much of its success stems from connecting clients to a wider array of community services.

The federal government's home-visiting activities can be better coordinated and focused. The Departments of Health and Human Services (HHS) and Education provide funding for various home-visiting services and initiatives. But the knowledge gained through these efforts is not always shared across agencies and with state and local programs. The federal government is uniquely situated to strengthen program design and operation for home visiting by communicating the wealth of practical knowledge developed at the federal, state, and local levels.

GAO's Analysis

Home Visiting Can Be an Effective Service Delivery Strategy

Evaluations of early intervention programs using home visiting demonstrate that these programs can improve both the short- and long-term health and well-being of families and children. Compared to families who were not given these services, home-visited clients had fewer low birthweight babies and reported cases of child abuse and neglect, higher rates of child immunizations, and more age-appropriate child development. Evaluations of home visiting that examined costs have demonstrated its potential to reduce the need for more costly services, such as neonatal intensive care. However, few experimental research initiatives have compared the cost-effectiveness of home visiting to that of other early intervention strategies. (See pp. 29-38.)

Successful programs usually combined home visiting with center-based and other community services adapted to the needs of their target group. Longitudinal studies showed that visited families showed lasting positive effects, including less welfare dependency. (See pp. 31-34.)

Characteristics That Strengthen Program Design and Implementation

Although many early intervention programs using home visiting have succeeded, others have failed to meet their stated objectives. Evaluators have attributed such failures to fundamental problems with program design and operation. (See pp. 39-42.) GAO identified critical design components for developing and managing programs using home visiting that

include (1) developing clear objectives and focusing and managing the program in accordance with these objectives; (2) planning service delivery carefully, matching the home visitor's skills and abilities to the services provided; (3) working through an agency with a capacity to deliver or arrange for a wide range of services; and (4) developing strategies for secure funding over time. (See pp. 42-43 and ch. 5.)

Federal Commitment Can Be Better Coordinated and Focused

HHS and Education support home visiting through both one-time demonstration projects and ongoing funding sources, such as Medicaid (a federal-state medical assistance program for needy people). But federal managers were not always aware of results in other agencies, materials developed through federally funded efforts, or state and local home-visiting efforts. (See pp. 21-23.)

The Federal Interagency Coordinating Council is a multiagency body that attempts to mobilize and focus federal efforts on behalf of handicapped children or those at risk of certain handicapping conditions. The Council is one federal mechanism that can be used to better disseminate information on successful home-visiting efforts and encourage collaboration on joint agency projects. (See pp. 24-25.)

Federal demonstration projects could be better focused to improve program design and fill information voids. Federal managers should emphasize evaluating potential cost savings associated with programs using home visiting and developing strategies to better integrate home visiting into community services, especially beyond federal demonstration periods. (See pp. 21-23 and 55-58.)

The Congress' recent interest in home visiting has focused on maternal and child health initiatives, including newly authorizing home-visiting demonstration projects through the Maternal and Child Health block grant. The Congress considered (but did not pass) legislation to amend the Medicaid statute to explicitly cover physician-prescribed home-visiting services for pregnant women and infants up to age 1. The Congressional Budget Office estimated that the additional federal fiscal year 1990-94 Medicaid costs for this initiative would range from $95 million, if home visiting were made an optional Medicaid service, to $625 million, if mandatory. (See pp. 26-28.)

Matter for Congressional Consideration

In view of the demonstrated benefits and cost savings associated with home visiting as a strategy for providing early intervention services to improve maternal and child health, the Congress should consider amending title XIX of the Social Security Act to explicitly establish as an optional Medicaid service, where prescribed by a physician or other Medicaid-qualified provider, (1) prenatal and postnatal home-visiting services for high-risk women and (2) home-visiting services for high-risk infants at least up to age 1. (See p. 63.)

Recommendations

GAO recommends that the Secretaries of HHS and Education require federally supported programs that use home visiting to incorporate certain critical program design components for developing and managing home-visiting services. (See p. 63.) The Secretary of HHS should specifically incorporate these components into the Maternal and Child Health block grant home-visiting demonstration projects.

GAO further recommends that the Secretaries

- make existing materials on home visiting more widely available through established mechanisms, such as agency clearinghouses,
- provide technical or other assistance to more systematically evaluate the costs, benefits, and potential cost savings associated with home-visiting services, and
- charge the Federal Interagency Coordinating Council with the federal leadership role in coordinating and assisting home-visiting initiatives.

(See pp. 63-64.)

Agency Comments

HHS and the Department of Education generally concurred with GAO's conclusions and recommendations. (See pp. 64-66 and apps. III and IV.) Both agreed with the need for more research and evaluation of the costs and benefits of home visiting. Without such data, they expressed reluctance to give priority to home visiting over other early intervention service delivery strategies. Education supported the Council as a focal point for federal home-visiting activities, although HHS believed it to be beyond the scope of the Council's mission. In regard to establishing home visiting as an optional Medicaid service, HHS stated that states essentially have the option now to cover home visiting under a variety of Medicaid categories of service. GAO believes, however, that amending the Medicaid statute to explicitly cover home visiting as an optional service would send a clear message to states about the efficacy of home visiting, especially for high-risk pregnant women and infants.

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Abbreviations

AFDC	Aid to Families With Dependent Children
CEDEN	Center for Development, Education and Nutrition
EPIC	Changing the Configuration of Early Prenatal Care
FICC	Federal Interagency Coordinating Council
GAO	General Accounting Office
HHS	Department of Health and Human Services
MCH	Maternal and Child Health
PTS	Parents Too Soon
RAPP	Roseland/Altgeld Adolescent Parents Program
SPRANS	Special Projects of Regional and National Significance
VISTA	Volunteers in Service to America
VNA	Visiting Nurses Association, Incorporated
WIC	Special Supplemental Food Program for Women, Infants, and Children

Introduction

For more than a century in both the United States and Europe, home visitors have provided individuals and families with preventive and supportive health and social services directly in their homes. While not a new concept, home visiting is an evolving service delivery strategy that numerous agencies in the United States are embracing with renewed enthusiasm, for both humanitarian and economic reasons. Experts believe that intervening early in the lives of certain families at risk of such negative outcomes as low birthweight, child abuse, and educational failure offers them promise of a better future through improved health and education. They also believe that home visiting can break down barriers that prevent families from accessing the care they need and that preventive services can be less costly in the long run than providing more expensive crisis, curative, and remedial services.

But what can home visiting do for those families facing many interconnected health, social, and educational risks? Is it an effective strategy for delivering services? What can we learn from the experience of Europe, where home visiting is a universal service? The Senate Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, in its search for innovative strategies to reduce threats to the health and well-being of disadvantaged families, asked us to answer these questions.

What Is Home Visiting?

Home visiting is a strategy that delivers health, social support, or educational services directly to individuals in their homes. Programs use home visitors of various disciplines and skills to accomplish various goals and provide various services. For example, home visiting has been used to deliver nutritional support to the elderly, medical care to the chronically ill, and social support to at-risk families. This report focuses on the home-based services, such as coaching, counseling, teaching, and referrals to other service providers for additional services, that are offered as a part of early intervention services for at-risk families with young children. Programs designed for such purposes can vary in their goals and services, as shown in Figure 1.1.

Figure 1.1: Examples of Programs Using Home Visiting to Serve At-Risk Families

Goals:	Improved parenting skills Enhanced child development Improved birth outcomes
Services:	Information delivery Referrals to other service providers Emotional support Health care
Providers:	Nurses Paraprofessionals Teachers Social workers

Home visiting occurs as a delivery strategy in three basic forms. The first is universal, in which all members of a broad population receive services. Great Britain uses public health nurses to provide preventive health information and examinations directly in the home to all families with newborns, regardless of family income status or need. The other two strategies target services to certain families. One offers a limited number of home visits to assess the environment and family situation, to provide some basic information, to reinforce positive behaviors, or to refer the family to other services as needed. The other targets some families for more intensive services, providing more frequent home visits over 1 or more years. Home visits may be part of other program services, which can include center-based parenting classes and job training classes, and developmental day care or preschool for children.

Some Families Face Service Barriers

At-risk families, especially those who are poor, uneducated, or headed by teenage parents, often face barriers to getting the health, education, and social services they need. The barriers can be financial, structural, or personal. Some experts believe that home visiting can reduce barriers by providing needed services to these families.

Lack of health insurance, the chief financial barrier, prevents many at-risk individuals from receiving adequate health care. An estimated 26 percent of the women of reproductive age—14.6 million—have no health insurance to cover maternity care, and two-thirds of these—9.5 million—have no health insurance at all. We reported in 1987[1] that

[1] Prenatal Care: Medicaid Recipients and Uninsured Women Obtain Insufficient Care (GAO/HRD-87-137, Sept. 30, 1987).

Medicaid[2] recipients and uninsured women received later and less sufficient prenatal care than privately insured women from the same communities. Women with no insurance must depend on free or reduced-cost care from a diminishing number of willing private physicians or from health department clinics and other settings usually financed by public funds.

Limited community resources, such as numbers of hospitals, community health clinics, social service agencies, and individual providers able or willing to serve the at-risk population, create structural barriers to care. The Institute of Medicine has reported that the capacity of clinic systems used by the at-risk prenatal population is so limited that critically important care is not always available.[3] Affordable, quality child care for disadvantaged families is not keeping pace with the growing numbers of single-parent households. The child welfare system is hard-pressed to process the large number of children who now need protection.

Inadequate funding for social and medical support programs presents an additional structural barrier to the disadvantaged. Only half of all poor children are covered by Medicaid. Fewer than half of the 7.5 million individuals eligible for the Special Supplemental Food Program for Women, Infants, and Children (WIC) receive the program's nutritional support. Head Start reaches only 20 percent of the more than 2.5 million eligible low-income children.

The structure of conventional care providers may be insufficient to meet the more complex and interrelated needs of the at-risk family. Experts believe that at-risk families need an array of services or, at minimum, close coordination among complementary service providers. A pregnant teen, for example, may need, in addition to regularly scheduled medical visits, an array of more comprehensive services, including counseling and basic parenting instruction. Generally, a mix of related services in one location or near one another, or adequate linkages among these services, does not exist for at-risk families.

Personal beliefs, knowledge, and attitudes can present additional barriers to getting care. Some researchers have found that some low-income

[2]Medicaid is a federally aided, state-administered medical assistance program for needy people, authorized under title XIX of the Social Security Act.

[3]Institute of Medicine, Prenatal Care: Reaching Mothers, Reaching Infants, ed. by Sarah S. Brown (Washington, D.C.: National Academy Press, 1988), pp. 63-69.

families do not understand or value the need for preventive services. They may distrust health care providers or social workers. These personal barriers are particularly evident in families experiencing social or cultural isolation resulting from recent immigration, a lack of friends and relatives that can provide emotional support, or substance abuse.

Experts view home visiting as one way to bridge some of these gaps. Providing services to families directly in the home allows programs to reach out directly to families who may be facing these barriers. The Office of Technology Assessment, the National Academy of Sciences' Institute of Medicine, the National Commission to Prevent Infant Mortality, and various private organizations and foundations (such as the Pew Charitable Trusts) suggest that home visiting allows programs to

- reach parents who lack self-confidence and trust in formal service providers,
- obtain a more accurate and direct assessment of the home environment,
- link parents with other health and human services, and
- present a model for good parenting.

Home visitors can support families during major life changes, such as the birth of a baby. Such personalized support may be particularly useful for disadvantaged families and families headed by teens who suffer from isolation and a lack of an intact social support system.

Home Visiting as an Early Intervention Strategy

Home visiting is often used as one means to provide early intervention services. Early intervention seeks to improve families' lives and prevent problems before they become irreversible or extremely costly. For example,

- prenatal care seeks to promote the health and well-being of the expectant mother and developing fetus, thereby reducing poor birth outcomes, such as low birthweight;
- parenting skills instruction for adolescent mothers with infant children seeks to promote nurturing skills, thereby reducing abusive and neglectful behavior; and
- preschool education seeks to prepare children for learning, thereby reducing later school failure.

The costs associated with low birthweight, teen motherhood, child abuse and neglect, and school dropouts are high. The cost to the nation of low

birthweight babies in neonatal intensive care is $1.5 billion annually.[4] The combined Aid to Families With Dependent Children, Medicaid, and Food Stamps cost in 1988 for families in which the first birth occurred when the mother was a teen was estimated at $19.83 billion.[5] The immediate, first-year public costs of new reported child abuse cases in 1983 were estimated at $487 million for medical care, special education, and foster care,[6] and since then the number of child maltreatment cases reported has gone up by 47 percent. Recent estimates suggest that each year's high school dropout "class" will cost the nation more than $240 billion in lost earnings and forgone taxes.[7]

Early intervention can save money. For example, for most American families, a child's measles inoculation is considered a standard part of well-child care. But forgoing such immunizations—which is happening more frequently—has costly consequences. Lifetime institutional care for a child left retarded by measles is between $500,000 and $1 million. Researchers have reported the potential of this and other early intervention strategies to save money, as shown in table 1.1. Experts believe that home visiting can be a key mechanism for reaching families early with the preventive services they need.

Table 1.1: Early Intervention Saves Money

Every $1 spent on:	Saves....
The federal Childhood Immunization Program	$10 in later medical costs.(1)
Prenatal care	$3.38 in later medical costs for low birthweight infants.(2)
Preschool Education	$3-6 in later remedial education, welfare, and crime control.(3)

Sources:

1. University of North Carolina Child Health Outcomes Project, Monitoring the Health of America's Children, Sept. 1984.

2. Institute of Medicine, Preventing Low Birthweight (Washington, D.C.: National Academy Press, 1985).

3. John R. Berrueta-Clement and others, Changed Lives: The Effects of the Perry Preschool Program on Youths Through Age 19, Monographs of the High/Scope Educational Research Foundation, Number 8, The High/Scope Press, 1984.

[4]"Special Report: Perinatal Issues 1989," American Hospital Association, Chicago (1989), p. 2.

[5]"Teenage Pregnancy and Too-Early Childbearing: Public Costs, Personal Consequences," Center for Population Options, Washington, D.C. (1989), p. 3.

[6]Deborah Daro, Confronting Child Abuse: Research for Effective Program Design, The Free Press, New York (1988), pp. 155-57.

[7]Children in Need: Investment Strategies for the Educationally Disadvantaged, The Committee for Economic Development, New York (1987), p. 3.

Objectives, Scope, and Methodology

Our objectives in reporting on home visiting were to determine

- the scope and nature of existing home-visiting programs in the United States and Europe that focus on maternal and child health and well-being;
- the effectiveness of home visiting as a service delivery strategy;
- the factors and strategies critical to designing home visitor programs; and
- program and policy options for the Congress and the Departments of Health and Human Services and Education in using home visiting as a strategy to improve maternal and child health and well-being.

To accomplish our first two objectives, we reviewed the literature on home visiting and interviewed experts in the areas of medical, social, and education intervention. In reviewing the literature, we especially looked for research-based evaluations of home visiting that reported program results and costs. We used this information, along with site visits to programs in the United States and Europe that used home visiting as a service delivery strategy, to accomplish our third objective—developing a framework of key design characteristics.

We identified and discussed seven key design characteristics with various home-visiting experts who concurred that these characteristics were important for developing and operating effective programs. Through our case studies, we observed these design characteristics in operation and subsequently combined these seven elements into four to form the basis for our framework.

Programs we selected for study were cited, either in the literature or by experts, as being successful in meeting their objectives. We did not conduct our own evaluation of the effectiveness or impact of these programs or conduct a comparative analysis of effectiveness of different service delivery strategies, such as home-based versus center-based services. While we identified many service areas that used home visiting, including home health care for the chronically ill or the elderly, we focused on programs serving families from the prenatal period through a child's second birthday.

From a list of 31 programs suggested by experts or the literature as being successful in meeting their objectives using home visiting, we conducted standardized telephone interviews to collect information about

program objectives and structure. We judgmentally selected six U.S. programs to provide diversity among program characteristics. Primary selection factors included programs

- with different objectives,
- operating in urban and rural areas,
- with different target populations, and
- using home visitors with different backgrounds (for example, nurses, paraprofessionals, lay workers).

In addition, we selected Great Britain and Denmark because of their long-standing tradition and experience in using home visitors to deliver maternal and child health services.

At each site we interviewed senior program managers, home visitors, and their supervisors. We interviewed representatives of other local service providers at five of six U.S. locations. In addition, in Great Britain and Denmark, we interviewed officials from the National Health Service, local health authorities, Great Britain's Health Visitors Association, and a Danish member of Parliament. We also accompanied home visitors on their rounds in the United States, Great Britain, and Denmark.

At the federal level, we contacted officials in the Departments of Health and Human Services and Education responsible for programs using home visiting to improve the health and well-being of mothers and young children. We reviewed agency documents to identify programs that have funded home visiting.

We did our work between December 1988 and February 1990 in accordance with generally accepted government auditing standards. We did not, however, verify program cost information.

Home Visiting Is an Established Service Delivery Strategy With Multiple Objectives

Home visitors have provided early intervention services in the United States and Europe for more than 100 years. In Great Britain and Denmark, home visiting is provided without charge to almost all families with young children. In the United States, home visiting is not universally available. It is conducted on a project-by-project basis, by governmental and private organizations, primarily targeted to "special needs" families. Governmental support for home visiting is split among many agencies and programs.

The federal government's involvement and interest in home visiting is apparent from its many programmatic activities, recently enacted laws, and proposed legislation. Many states are using project grants and formula funding from recent legislation, such as Medicaid, to expand home visiting in their states. The Congress authorized new home-visiting demonstration grants in the 101st Congress, although it did not appropriate funds. Despite such initiatives, we found only limited information exchange about home-visiting experiences across program lines.

Home Visiting Widespread in Europe

Home visiting is a common part of Western European maternity care.[1] Home visitors may be midwives, but most often are specially trained nurses. Usually women are visited at home after a child's birth (postpartum). Nine European countries provide prenatal and/or postpartum home visiting either routinely or for special indications, such as clinic nonattendance. (See table 2.1.) Seven countries routinely provide at least one postpartum home visit.

[1]C. Arden Miller, M.D., Maternal Health and Infant Survival, National Center for Clinical Infant Programs, Washington, D.C. (1987).

Table 2.1: Home Visiting in Nine Western European Countries

Country	Prenatal	Postpartum
Belgium	X[a]	X
Denmark	X[a]	X[b]
Germany	O	O
Great Britain	O	X
France	O	O
Ireland	O	X
Netherlands	X	X
Norway	O	X
Switzerland	O	X

Legend:

X Home visiting is provided at least once for all pregnant women or new mothers.

O Home visiting is provided under special circumstances, such as follow-up for a woman not attending prenatal clinic.

[a]Unevenly implemented.

[b]In municipalities that have home visitors (94 percent of all Danish municipalities).

Source: C. Arden Miller, M.D., Maternal Health and Infant Survival.

In the two European countries that we visited, Great Britain and Denmark, home visiting is a main source of preventive health information and care for young children. It began, however, as a way to reduce infant mortality.

Home visiting was begun in Great Britain in 1852 by a local voluntary group in Manchester and Salford. In 1890, Manchester became the first locality to employ a home visitor. By 1905, 50 areas employed home visitors. When Great Britain created the National Health Service in 1948, home visitors were included as a profession. Today home visitors serve all British families with young children.

Home visiting in Denmark started as a pilot program in 1932 and was established by law in 1937. Although the service has always been optional, nearly every township has a nurse home-visiting program today. Ninety percent of all Danish infants live in counties served by home visitors.

Home visiting in Great Britain and Denmark is provided free of charge as a publicly supported service to families with young children regardless of family income. It is an established part of preventive health services in national health care systems to which all citizens have access.

Home visitors teach parents good health practices and provide preventive health services and medical screenings to infants and children directly in their homes. In Great Britain, home visitors meet mothers-to-be at the clinic, and then follow the child after birth—through both in-home and clinic visits—until the child reaches school age. In Denmark, home visitors begin visiting the family soon after a child is born and visit each child several times during the first year.

Universal home visiting has certain benefits. Such an approach can attract wider political acceptance with no stigma attached to receiving the services. In the opinion of public health officials in Denmark and Great Britain, home visiting promotes good health practices and has become an important part of preventive health care in their countries. However, neither country has a system to evaluate home-visiting program benefits.

Both Great Britain's and Denmark's home-visiting programs are facing change. Great Britain is reexamining its health service, with an eye to making it more effective and economical. As a result, British local health authorities are beginning to develop local measures of home-visiting effectiveness. Because of a shortage of home visitors, local health authorities are beginning to target their services more closely to local needs and to at-risk families. Health officials believe that in the future, home visitors will visit each family in home at least once, but reserve follow-up and more intensive in-home service to families they deem at risk. Low-risk families will be followed in the clinic. Denmark is reviewing its health service and may require each county to make home-visiting services available. However, Denmark may also begin charging fees for home-visiting services.

U.S. Home Visiting Targeted to Low-Income and Special Needs Families

Home visiting in the United States had a similar beginning to that in Great Britain and Denmark, but its development has been much less systematic and uniform. Nevertheless, many local public and private agencies provide home visiting. Compared to Europe, U.S. programs that provide home visiting are diverse in their goals and are likely to be targeted to families with special needs, such as families with handicapped children or children not developing normally.

Home visiting began in the United States during the 19th century to improve the health and welfare of the poor. In 1858, well-to-do volunteers became "Friendly Visitors" to poor families in Philadelphia, and the movement later spread to other large Eastern cities. In the early

20th century, settlement houses[2] began to send visiting nurses, teachers, and social workers into poor families' homes to provide education, preventive health care, and acute care. This effort was initially fueled by a growing awareness that prenatal care and proper infant care could improve the survival of infants. Visiting nurse programs evolved from these beginnings. During the 1970s, home visiting to improve low-income children's school readiness was encouraged through Head Start[3] demonstration projects. Today Head Start, although primarily a center-based program, administers one of the largest home-visiting programs for low-income families in the United States, serving over 35,000 children yearly.

Targeted Programs With Diverse Goals

Many programs in the United States use home visiting to provide health, social, or educational services to certain families. Programs using home visiting are generally targeted to families with special needs, such as those with developmentally delayed children or abused children. These programs provide specialized services depending on the program focus and families' needs.

Very limited data are available to quantify the number of programs using home visiting. However, two researchers, Richard Roberts and Barbara Wasik, have recently attempted to develop the first comprehensive picture of such programs.[4] In 1988, they surveyed over 4,500 programs in the United States that appeared to use home visiting as a service delivery technique. Of the 1,900 programs for which they obtained detailed data, 76 percent were targeted toward families with particular problems, such as abusive parents or parents with physically handicapped children. One-third of the programs served children in the 0-3-year-old range.

Unlike in Europe, where preventive health care is the main purpose, Roberts and Wasik found that in the United States, many home-visiting programs focus on education or social services. Only a third of the programs responding listed health as the primary focus. Overall, 43 percent

[2]Community centers established in poor urban neighborhoods where trained workers tried to improve social conditions by providing such services as kindergartens and athletic clubs.

[3]A national program providing comprehensive developmental services, including educational, health, and social services, primarily to low-income preschool children age 3 to 5 and their families.

[4]Barbara Hanna Wasik and Richard N. Roberts, "Home Visiting Programs for Low-Income Families," Family Resource Coalition Report, No. 1 (1989).

of the responding programs were either education or Head Start programs.

Only 22 percent of the programs targeted to low-income families served expectant families before birth and children up to age 3, compared with 43 percent of programs not specifically targeted to low-income families. Head Start programs represented 45 percent of programs targeted specifically to low-income families. However, Head Start primarily serves children age 3 to 5 years.

Funding for U.S. Home Visiting From Multiple Agencies

Federal and state governments support home visiting through many programs, with both one-time project funds and ongoing funding sources. We could not determine the full extent of federal funding for home visiting, because federal managers we interviewed did not know the extent to which states were using federal monies to fund home visiting. Federal managers were not always aware of results of effective programs funded by other agencies, the materials developed, or of state efforts in home visiting.

The Departments of Health and Human Services and Education have provided funds for home visiting to families with young children through various programs and through both project and formula grants. (See table 2.2.) Project grants are given directly to public or private agencies to finance specific projects, such as developing model programs. Formula grants are given to states, their subdivisions, or other recipients according to a formula (usually related to population) for continuing activities not confined to a specific project. States often have to match federal formula grant funds with state-contributed funds.

Table 2.2: Federal Programs Used to Fund Home Visitor Projects[a]

Agency	Office	Program	Type
Department of Health and Human Services			
Office of Human Development Services/ Administration for Children, Youth, and Families	Head Start	Home-Based Head Start	Project grant
	Head Start	Parent Child Centers	Project grant
	Head Start	Comprehensive Child Development Centers	Project grant
	National Center on Child Abuse and Neglect	Child Abuse and Neglect "Challenge" Grants	Formula grant
	National Center on Child Abuse and Neglect	Child Abuse and Neglect Research and Demonstration Grants	Project grant
Public Health Service	Maternal and Child Health and Resources Development	Maternal and Child Health Services Block Grant	Formula grant
	Maternal and Child Health and Resources Development	Special Projects of Regional and National Significance (SPRANS)[b]	Project grant
Health Care Financing Administration	Bureau of Program Operations	Medicaid	Formula grant[c]
Department of Education			
Office of Special Education Programs		Education of the Handicapped Act Part B & H Programs	Formula grant
		Chapter 1 Handicapped Program[d]	Formula grant
		Handicapped Children's Early Education Program	Project grant

[a]Home visiting may be funded by other federal programs not identified by GAO and not listed here.

[b]These projects are funded by a federal set-aside of 10 to 15 percent of the Maternal and Child Health Block Grant appropriation.

[c]Medicaid is a joint federal-state program that entitles eligible persons to covered medical services. The federal government matches state payments to providers and administrative costs using a formula based on state per capita income.

[d]The Chapter 1 Handicapped Programs of the Education Consolidation and Improvement Act of 1981 provide grants to states to expand or improve educational services to handicapped children.

States have supported home visiting through their use of both federally funded formula grants and state funds. For example:

- Tennessee, Michigan, and Delaware have used federal child abuse and neglect "challenge" grant funds to support home-visiting programs.
- Hawaii has used both state funds and Maternal and Child Health Services (MCH) block grant[5] funds to expand to more sites a home-visiting program to prevent child abuse and neglect.

[5]The MCH block grant is a federal formula grant awarded annually to state health agencies to assure access to quality maternal and child health services, reduce infant mortality and morbidity, and provide assistance to children needing special health services.

- Missouri has funded a universal, educational home-visiting program, "Parents as Teachers," using state education funds.
- Maine is trying to establish public health nurse home visiting for every newborn, using state public health funds and MCH block grant funds.

The Departments of Health and Human Services (HHS) and Education did not know the full amount of federal funds spent for early intervention services for children who are handicapped, developmentally delayed, or at risk of developmental delay. Also, most federal managers we contacted could not tell us the amount of funding their programs were providing for home visiting as an early intervention service delivery for at-risk children. Managers at the federal level could provide examples of federally funded demonstration programs that used home visiting, but were not sure of the extent to which states were using formula grants to fund home visiting. Clearly, many sources of federal support for home visiting are available. But overall funding information is limited. With the exception of Home-Based Head Start, home visiting has never been the primary focus of any federal programs.

Despite this federal and state commitment to home visiting, we found only limited information exchange about home visiting across program lines. For example, Head Start has developed materials for home visitors, including The Head Start Home Visitor Handbook and A Guide for Operating a Home-Based Child Development Program. However, some program officials in other HHS agencies were not aware that these guides existed and thus could not share them with projects they were supervising.

Some federal officials did not know that states were providing home visiting using federal formula funds. Health Care Financing Administration officials we contacted who manage the Medicaid program were not aware that some states were providing preventive prenatal services in the home as part of the state Medicaid program.

Some of the clearinghouses funded by federal agencies that have supported home visiting cannot readily provide information on that topic. The Education Resources Information Center, a clearinghouse that the Department of Education supports, was able to identify resource materials on home visiting. However, two HHS-funded clearinghouses, the National Maternal and Child Health Clearinghouse and the Clearinghouse on Child Abuse and Neglect Information, could not readily identify resource materials on home visiting to improve maternal and child health outcomes or to prevent abuse and neglect.

New Impetus for Home Visiting From Recent Legislation

Several recently enacted laws include provisions that may encourage home visiting. The Education of the Handicapped Act Amendments of 1986, recent Medicaid prenatal care expansions, and the 1988 Child Abuse Prevention, Adoption, and Family Services Act provide options for states to fund home visiting. Recently introduced bills also contain provisions to encourage home visiting through earmarked program funds and through additional Medicaid changes.

Public Law 99-457 May Broaden Availability of Home Visiting

The Education of the Handicapped Act Amendments of 1986, Public Law 99-457, may further encourage home visiting. Through the addition of Part H, the statute authorized financial assistance to assist states in developing and implementing statewide, comprehensive early intervention services for developmentally delayed and at-risk infants and toddlers and their families. The legislation extended program benefits to children aged birth through 2 years in states choosing to participate. The Department of Education has indicated that home visiting, while optional, is among the minimum services that should be provided to eligible children.

States must serve a core group of developmentally delayed children, but at their discretion can also serve children who are at risk of developmental delay. Developmental delay includes delays in one or more of the following areas: cognitive development, physical development, language and speech development, psychosocial development, and self-help skills. Children with a diagnosed physical or mental condition that has a high probability of resulting in developmental delay are also eligible. Children can be classed as "at risk" due to either environmental or biological risk factors. Environmental risk factors for children could include poverty, having a teen parent, or being homeless. The legislation gives states flexibility in defining developmental delay and setting eligibility and service delivery standards. However, once the standard is set, all children in the state who are eligible are entitled to services. State programs must be in place and serving all eligible children by a state's fifth year of participation, which could be as early as July 1991 for states that have participated in the program continuously since its inception in fiscal year 1987.

To help mobilize resources and facilitate state implementation of Public Law 99-457, agencies within the Department of Education and HHS created the Federal Interagency Coordinating Council (FICC). FICC's mission is to develop specific action steps that promote a coordinated, interagency approach to sharing information and resources in five areas: (1)

regulations, program guidance, and priorities; (2) parent participation; (3) identification of children needing services; (4) materials and resources; and (5) training and technical assistance. (See table 2.3 for participating agencies.) FICC-supported activities include an annual Partnerships for Progress conference, which has been used to disseminate information to state officials on innovative programs as well as on funding sources that can be used to pay for services. Another joint project was the development and distribution of a reference book for schools attended by children who are dependent on medical technology, such as children who need regular renal dialysis. The Bureau of Maternal and Child Health and Resources Development and representatives of FICC also sponsored a February 1988 conference and subsequent publication, Family Support in the Home: Home Visiting Programs and P.L. 99-457, to provide guidelines and recommendations for using home visiting as a service delivery mechanism under the statute.

Table 2.3: Signatories to the FICC Memorandum of Understanding

	Signatories	
Department	**Principal**	**Other**
Education	Assistant Secretary, Office of Special Education and Rehabilitative Services	Director, Office of Special Education Programs
		Director, National Institute on Disability and Rehabilitation Research
HHS	Assistant Secretary, Office of Human Development Services	Commissioner, Administration for Children, Youth and Families
		Commissioner, Administration on Developmental Disabilities
	Assistant Secretary for Health	Director, National Institute on Mental Health
		Administrator, Health Resources and Services Administration
		Director, Bureau of Maternal and Child Health and Resources Development
		Director, Office of the Associate Director for Maternal and Child Health
	Administrator, Health Care Financing Administration	

States Are Using Medicaid to Fund Home Visiting

Medicaid has become a more significant source of funding for pre- and postnatal services as Medicaid eligibility has expanded to cover more low-income women. Beginning with the Deficit Reduction Act of 1984, the Congress expanded Medicaid coverage of pregnant women and children, primarily by severing the link between eligibility for Medicaid and Aid to Families With Dependent Children (AFDC).[6] As of April 1, 1990, states are required to cover pregnant women and children up to age 6 with family income up to 133 percent of the federal poverty level. At their option, states can also cover children up to age 8 with income up to 133 percent of federal poverty and pregnant women and infants up to age 1 with family income from 133 percent to 185 percent of the federal poverty level.

In states that allow Medicaid payment for home visiting, Medicaid can serve as an ongoing funding source. The Consolidated Omnibus Budget Reconciliation Act of 1985 permits states to obtain federal matching funds when offering more extensive or "enhanced" prenatal care services to low-income pregnant women. These kinds of services do not have to be made available to other Medicaid recipients. States may add case management and extra prenatal care services by amending their state plans. While home visiting is not specifically listed as a covered Medicaid service, some states have used their authority under the 1985 act to obtain reimbursement for in-home case management services or other in-home services to certain pregnant women. New Jersey, for example, requires at least one prenatal and postpartum home visit for high-risk women being served through its Medicaid-funded enhanced prenatal care program. According to the National Governors' Association and the National Commission to Prevent Infant Mortality, as of February 1990, 24 states[7] were using Medicaid to pay pre- and/or postnatal care providers for home visiting.

[6]Medicaid eligibility for pregnant women and children had been linked to actual or potential receipt of cash assistance under the AFDC program or the Supplemental Security Income program. To be eligible for these programs, income and assets cannot be above specified levels. On average across the states, a family's annual income in 1989 had to fall below 48 percent of the federal poverty level to qualify for AFDC, with income limits ranging from 14.0 percent ($1,416 for a family of three) in Alabama to 79.0 percent ($7,956) in California. The 1989 federal poverty level for a family of three was $10,060.

[7]Alabama, Alaska, Arizona, Arkansas, Connecticut, Delaware, Idaho, Kansas, Maryland, Michigan, Minnesota, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Tennessee, Utah, Vermont, Virginia, and Washington.

Home Visiting Is Encouraged to Prevent Child Abuse and Neglect

The Child Abuse Prevention, Adoption, and Family Services Act of 1988 recognized home visiting as an appropriate strategy for preventing child abuse and neglect. This act focused federal efforts to aid states and localities in preventing child abuse as well as intervening once abuse had occurred. The legislation reauthorized a state formula grant program that "challenges" states to establish earmarked funding for child abuse and neglect prevention programs by providing a 25-percent federal dollar match. States have used challenge grant monies to support home-visiting services.

Increased Interest in Home Visiting in Recent Legislative Proposals

Several legislative proposals that addressed home visiting were introduced in the 101st Congress:

- The Healthy Birth Act of 1989 (H.R. 1710 and S. 708) proposed an increased authorization of $100 million to the MCH block grant program to fund various additional projects, including home visiting.
- The Maternal and Child Health Improvement Act of 1989 (H.R. 1584) proposed an increased authorization of $50 million for the MCH block grant program, to be used partially for home visiting.
- The Maternal and Child Health Block Grant Amendments of 1989 (H.R. 2651) proposed an increased authorization of $100 million for the MCH block grant program, with a set-aside to fund home visiting demonstrations.
- The Child Investment and Security Act of 1989 (H.R. 1573) proposed to require Medicaid coverage of prenatal and postpartum home-visiting services.
- The Omnibus Budget Reconciliation Act of 1989 (H.R. 2924), The Infant Mortality Amendments of 1990 (S. 2198), and The Medicaid Infant Mortality Amendments of 1990 (H.R. 3931) proposed that prenatal home-visiting services for high-risk pregnant women and postpartum home-visiting services for high-risk infants up to age 1 be made optional Medicaid services.

The Congressional Budget Office estimated that if home visiting was made an optional Medicaid service, as proposed in H.R. 2924, the additional federal Medicaid cost would be $95 million over a 5-year period for fiscal years 1990-94. If the services were mandatory, as was proposed in H.R. 1573, the estimated additional 5-year federal cost could go up to $625 million.

None of this legislation was passed as introduced, as of June 1990. However, the Congress did authorize, through the Omnibus Budget Reconciliation Act of 1989 (Public Law 101-239), new home-visiting demonstration projects to be funded through a set-aside from the MCH block grant when its funding level exceeds $600 million (currently at $561 million).

Home-Visiting Evaluations Demonstrate Benefits, but Some Questions Remain

Evaluations of early intervention programs using home visiting have shown that children and their families had improved health and well-being, compared to families who did not receive services. This was particularly true for families who are among groups that often face barriers to needed care, such as adolescent mothers, low-income families, and families living in rural areas. In a few cases where follow-up studies were done on programs that combined home and center-based services, these salutary effects persisted over time as children developed. More intensive services seemed to produce the strongest effects. But few experimental research initiatives have compared home visiting to other strategies for delivering early intervention services.

Cost data, while limited, indicate that providing home-visiting services for at-risk families can be less costly than paying for the consequences of the poor outcomes associated with delayed or no care. Evaluations have also not adequately addressed whether home visiting is more costly than providing similar services in other settings.

Program Evaluations Show Benefits of Home Visiting

Evaluations of early intervention programs that used home visiting show that this strategy can be associated with a variety of improved outcomes for program participants—improved birth outcomes, better child health, improved child welfare, and improved development—when compared to similar individuals who did not receive services. In addition to being at risk for adverse outcomes, the target population for these programs often belonged to groups that experience difficulty accessing needed services.

Examples of improved outcomes associated with home visiting include the following:

- Pregnant adolescents in rural areas visited by the South Carolina Resource Mothers Program had half the percentage of small-for-gestational-age infants and significantly fewer low birthweight babies compared to a similar group of pregnant adolescents in a rural county without such a program.[1]
- Low-income mothers visited in Michigan gave birth to babies with significantly improved birthweight and health at birth, compared to both

[1]Henry C. Heins, Jr., and others, "Social Support in Improving Perinatal Outcome: The Resource Mothers Program," Obstetrics and Gynecology, Vol. 70, No. 2 (Aug. 1987).

their previous pregnancies and to a control group with similar demographic characteristics.[2]

- Children in working class families randomly assigned to a group that received home-visiting services had significantly fewer accidents in their first year and had a better rate of immunizations than children who were not visited. The home visiting was more successful when it began prenatally.[3]
- For several home-visiting projects, participants had a lower reported incidence of child abuse and neglect than that found in similar families.[4]

Children at risk of developmental delay have also benefited from services delivered through home visiting. Premature low birthweight babies and malnourished children whose families were seen by home visitors were able to physically and developmentally "catch up" to their healthier peers.[5] For example:

- Fewer low birthweight children in a Florida program needed additional developmental services after graduating from a randomly assigned 2-year home-visiting program compared to children who received no services.[6]
- Three years after the program ended, children in Jamaica who were home visited to help them overcome the effects of malnutrition had significantly higher IQ scores than malnourished children with similar medical and demographic characteristics who had not received services.[7]

Other programs have also found significant improvements in the cognitive ability of rural and inner-city children who had been provided with

[2]Jeffrey P. Mayer, "Evaluation of Maternal and Child Health Community Nursing Services: Application of Two Quasi-Experimental Designs," Health Action Papers, Vol. 2 (1988).

[3]Charles P. Larson, "Efficacy of Prenatal and Postpartum Home Visits on Child Health and Development," Pediatrics, Vol. 66, No. 2 (Aug. 1980).

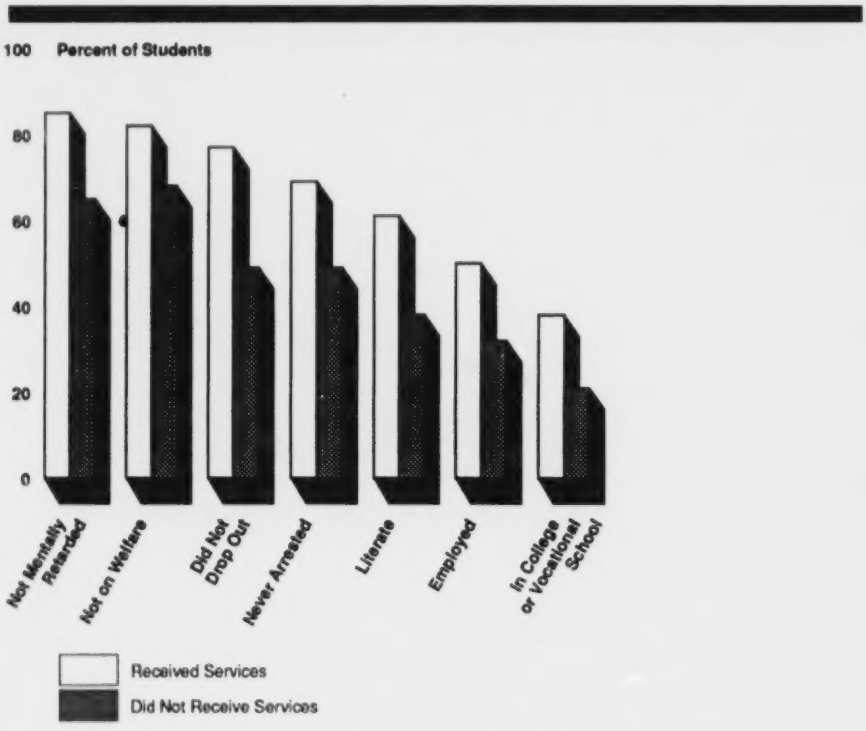
[4]U.S. Congress, Office of Technology Assessment, Healthy Children: Investing in the Future, OTA-H-345 (Washington, D.C.: U.S. Government Printing Office, Feb. 1988); Deborah Daro, Confronting Child Abuse: Research for Effective Program Design, The Free Press, New York, 1988.

[5]Tiffany M. Field and others, "Teenage, Lower-Class, Black Mothers and Their Preterm Infants: An Intervention and Developmental Follow-up," Child Development, Vol. 51 (1980); Virginia Rauh and others, "Minimizing Adverse Effects of Low Birthweight: Four-Year Results of an Early Intervention Program," Child Development, Vol. 59, (1988); Gail S. Ross, "Home Intervention for Premature Infants of Low-Income Families," American Journal of Orthopsychiatry, Vol. 54, No. 2 (Apr. 1984).

[6]Michael B. Resnick and others, "Developmental Intervention for Low Birth Weight Infants: Improved Early Developmental Outcomes," Pediatrics, Vol. 80, No. 1 (July 1987).

[7]Sally Grantham-McGregor and others, "Development of Severely Malnourished Children Who Received Psychosocial Stimulation: Six Year Follow-up," Pediatrics, Vol. 79, No. 2 (Feb. 1987).

Figure 3.1: Students Receiving Preschool and Home-Visiting Services Were More Successful in Later Years



Note: Results show comparative outcomes at age 19 for High/Scope Perry Preschool children compared to the randomly selected control group

The Yale Child Welfare Research Program also had impressive results over time. A group of 17 families received home visiting along with developmental day care and close pediatric supervision. The control group, chosen the following year, was another group of families with similar characteristics who did not receive program services. Ten years later, more home-visited families than control group families were employed and had moved to improved housing. Their children were doing better in school. Teachers rated the program-participating children as better adapted socially and needing fewer remedial school services than the control children.[11]

[11] Victoria Seitz and others, "Effects of Family Support Intervention: A Ten-Year Follow-up," Child Development, Vol. 56 (1985).

preschool services through home visiting, compared to children who were not provided with such services.[8]

Benefits to Families Can Persist Over Time

The full effects of early intervention programs using home visiting as part of their service delivery can become more impressive as parents use what they have been taught and children grow and further develop. Such contact during a child's early years often results in improved family functioning, better school performance, and better outcomes after high school. We identified several programs with longitudinal evaluations that had provided both center- and home-based services.

From 1962 to 1967, the High/Scope Perry Preschool Program, in Ypsilanti, Michigan, provided both weekly home visits for the parents of low-income, 3- and 4-year-olds and comprehensive center-based preschool services for the children. Children from the families who agreed to participate were randomly assigned to either a group that received preschool and home visiting or a control group. Participants scored significantly higher on tests of intellectual ability after 1 year in the program and did better on standardized testing through the middle grades, than did the control children. At age 15, they placed a higher value on schooling.

For many of these children, early school success served as a preparation for greater life success. At age 19, young people who had participated in the program were more likely to be literate and employed or in college. They were less likely to have dropped out of school, to be on welfare, or to have been arrested.[9] (See fig. 3.1.) One reviewer looking at the effects of preschool pointed to the High/Scope Perry Preschool's home visiting as being a significant factor in its success.[10]

[8]Donna M. Bryant and Craig T. Ramey, "An Analysis of the Effectiveness of Early Intervention Programs for Environmentally At-Risk Children," in The Effectiveness of Early Intervention for At-Risk and Handicapped Children, ed. Michael J. Guralnick and Forrest C. Bennett, Academic Press, Inc. Orlando (1987); Charles W. Burkett, "Effects of Frequency of Home Visits on Achievement of Preschool Students in a Home-Based Early Childhood Education Program," Journal of Educational Research, Vol 76, No. 1 (Oct. 1982).

[9]Lawrence J. Schweinhart and David B. Weikart, "The High/Scope Perry Preschool Program," in 14 Ounces of Prevention: A Casebook for Practitioners, Richard H. Price and others, ed., American Psychological Association, Washington, D.C. (1988).

[10]Ron Haskins, "Beyond Metaphor: The Efficacy of Early Childhood Education," American Psychologist, Vol 44, No. 2 (Feb. 1989).

Intense Programs Have More Marked Effects

Evaluations of early intervention programs using home visiting and varying in service intensity—the amount of program contact with clients over time—found that more intense programs are generally more effective.

An evaluation of a program in Jamaica that provided home-visiting services to improve low-income children's cognitive development found that children who were visited weekly showed the most marked improvement in development, compared to children who were randomly assigned to receive less frequent or no services. Children visited every 2 weeks also showed significant improvement in cognitive development, but not as great as those visited weekly. The children visited monthly showed a similar developmental pattern to the children receiving no services.[12]

Intensive home visiting, in conjunction with medical and educational interventions, has proven effective at keeping IQ scores of groups of randomly assigned disadvantaged children from dropping over time, compared to those of control groups. A comparative evaluation of 17 programs, 11 of which used home visiting, showed that program effectiveness increased as other services were combined with home visiting. Two of the three most effective and most intensive programs used home visiting in addition to center-based services.[13]

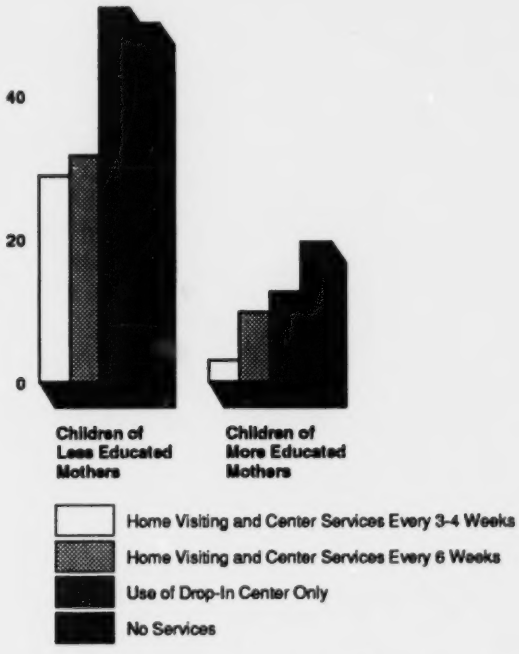
The Brookline, Massachusetts, Early Education Project is an example of home visiting as a crucial service component for reaching disadvantaged families. This experimental program randomly assigned recruited families to varying levels of drop-in, child care, and home-visiting services provided from infancy through the preschool years. Children of mothers who had not graduated from college and who received only center-based services were almost twice as likely to have reading difficulties in second grade as similar children who had received both home- and center-based services.[14] (See fig. 3.2.)

[12]Christine Powell and Sally Grantham-McGregor, "Home Visiting of Varying Frequency and Child Development," Pediatrics, Vol. 84, No. 1 (July 1989).

[13]Donna M. Bryant and Craig T. Ramey, "An Analysis of the Effectiveness of Early Intervention Programs for Environmentally At-Risk Children," in The Effectiveness of Early Intervention For At-Risk and Handicapped Children, Michael J. Guralnick and Forrest C. Bennett, ed., Academic Press, Inc. (1987).

[14]Donald E. Pierson, "The Brookline Early Education Project," in 14 Ounces of Prevention: A Casebook for Practitioners, Richard H. Price and others, ed., American Psychological Association, Washington, D.C. (1988).

Figure 3.2: Type and Amount of Services Affect Later Reading Ability


60
Percent of 2nd Graders with Reading Problems
40
20
0
Children of Less Educated Mothers
Children of More Educated Mothers
Home Visiting and Center Services Every 3-4 Weeks
Home Visiting and Center Services Every 6 Weeks
Use of Drop-In Center Only
No Services

Source: "The Brookline Early Education Project," Donald E. Pierson in 14 Ounces of Prevention: A Casebook for Practitioners, Richard H. Price and others, American Psychological Association, Washington, D.C. (1988).

Research Shows Home Visiting Compared to Other Strategies Is Promising, but More Study Is Needed

Whether one early intervention strategy is more effective than another is difficult to determine from the literature because few programs were developed and operated as part of a controlled experiment or quasi-experiment. Many programs demonstrating benefits to clients delivered both in-home and center-based services, but did not try to determine which had the greater impact or which was the most cost-effective. We identified two comparative studies that examined the differential effects of early intervention service delivery strategies.

Beginning in 1978, Elmira, New York, was the site of a major and often-cited research experiment using home visitors as a service delivery strategy. First-time mothers, particularly teenage, single, or poor mothers, were recruited for the program and then randomly assigned to

one of four treatments: (1) no program services during pregnancy, (2) free transportation to prenatal care and well-baby visits, (3) nurse home visiting during pregnancy and transportation services, or (4) nurse home visiting during pregnancy and until the child's second birthday, in addition to transportation services. The program had both short- and long-term positive effects for the home-visited mothers and their children when compared to those receiving only transportation to health clinics or no services. The positive effects of those visited in the home, compared to the women who were not visited, included the following:

- Higher birthweight babies born to teen mothers and smokers.
- Fewer kidney infections during pregnancy.
- Fewer verified cases of child abuse and neglect.
- Four years later, more months of employment, fewer subsequent pregnancies, and postponed birth of second child.[15]

A primary reason for using home visitors is to reach families who might otherwise not have access to services, such as rural families living in isolated areas, or families who might avoid formal service providers, such as abusive families. Home-Based Head Start is an example of a program that provides services through home visiting predominantly to rural children who could not take advantage of the traditional center-based Head Start program. Although the children were not randomly assigned to the two different service delivery strategies, an evaluation of the Home-Based Head Start program found that, after statistically adjusting for initial group differences, children from home-based, center-based, and mixed home- and center-based Head Start programs tested equally well in cognitive ability and social development following their participation in preschool activities.[16]

[15]David L. Olds and others, "Improving the Delivery of Prenatal Care and Outcomes of Pregnancy: A Randomized Trial of Nurse Home Visitation," Pediatrics, Vol. 77, No. 1 (Jan. 1986); David L. Olds and others, "Preventing Child Abuse and Neglect: A Randomized Trial of Nurse Home Visitation," Pediatrics, Vol. 78, No. 1 (July 1986); David L. Olds and others, "Improving the Life-Course Development of Socially Disadvantaged Mothers: A Randomized Trial of Nurse Home Visitation," American Journal of Public Health, Vol. 78, No. 11 (Nov. 1988).

[16]John M. Love and others, Study of the Home-Based Option in Head Start, RMC Research Corporation, 1988.

Limited Research Shows Home Visiting Can Produce Cost Savings

Evaluations that analyze home visiting's costs and benefits, while few in number, have shown that programs incorporating home visiting as a service delivery strategy can prevent families from needing later, more costly public supportive services. Cost savings become more obvious when examined by longitudinal studies or when initial costs for alternate solutions are high. Whether home-based services are more expensive than providing similar center-based services depends on a program's objectives, services, and type of provider. Few true cost-effectiveness studies have been done.

Of the 72 published evaluations we reviewed that identified the effects of home visiting, only 8 discussed program costs and only 6 had estimates of immediate or future cost savings. Yet the results of these studies are compelling. They represent findings from studies with rigorous experimental or quasi-experimental designs, and several are often cited in the early intervention literature.

The High/Scope Perry Preschool Program evaluators estimated that the program—with its critical home-visiting component—saved from $3 to $6 of public funds for every $1 spent. The total savings to taxpayers for the program (in constant 1981 dollars discounted at 3 percent annually) were approximately $28,000 per program participant.[17] According to the program evaluators, taxpayers saved approximately $5,000 in special education, $3,000 in crime, and $16,000 in welfare expenditures per participant. More Perry Preschool graduates enrolled in college or other advanced training, which added $1,000 per preschool participant's costs; but due to anticipated increased lifetime earnings, the average preschool participant was expected to pay $5,000 more in taxes.

The Yale Child Welfare Research Program also showed significant cost savings over time. Researchers estimated that 15 control families cost taxpayers $40,000 more in 1982 in welfare and school remediation expenses than did 15 home-visited families in a follow-up study conducted 10 years later. Families in the program showed a slow but steady rise in financial independence, which translated into reduced subsequent welfare costs. No significant differences were found for girls, but each participating boy required, on average, $1,100 less in school remedial services than boys in families who had not received services.[18]

[17]Lawrence J. Schweinhart and David B. Weikart, "The High/Scope Perry Preschool Program," in 14 Ounces of Prevention: A Casebook for Practitioners.

[18]Victoria Seitz and others, "Effects of Family Support Intervention: A Ten-Year Follow-up," Child Development.

Few Comparisons of Cost-Effectiveness

Cost-effectiveness analysis evaluates the cost of producing a particular outcome using alternative strategies. But the most effective or least costly alternative may not always be the most cost-effective.[19] We found only three cost-effectiveness analyses of programs that compared home visiting to other alternatives. In one case, providing home visiting was more cost-effective than providing longer hospitalization for low birthweight infants. In another case, using paraprofessional home visitors in conjunction with professional, center-based social work therapy was more effective in treating child-abusing families, but also more costly, than providing center-based social work therapy alone. A third case showed that providing home-based preschool services cost slightly less per child on average than center-based services, but resulted in equal outcomes.

The New England Journal of Medicine reported that home visiting allowed one Philadelphia hospital to serve low birthweight infants more cost-effectively at home than in the hospital. Low birthweight infants were randomly assigned to one of two groups. Members of the control group were discharged according to routine nursery criteria, which included an infant weight of about 4.8 lbs. Those in the experimental group were discharged before reaching this weight if they met a standard set of conditions. Families of early-discharge infants received individualized instruction, counseling, and home visits, and were allowed to call a hospital-based nurse specialist with any questions for 18 months.[20]

Early hospital discharge did not result in later problems, such as increased rehospitalizations, and proved to be more cost-effective than keeping infants in the hospital. The average hospital charge for the early discharge group receiving in-home services was $47,520 compared to $64,940 for the control group. The home-visited infants also experienced a 22-percent reduction--$5,933 versus $7,649—in physicians' costs. Costs for the nurse home visits averaged $576 per child, compared to average additional overall hospital costs and physician charges of $19,136 per child for the comparison group of low birthweight infants retained in the hospital. Since 75 percent of the early discharged infants were on Medicaid, the program represented considerable public health cost savings.

[19]Henry M. Levin, Cost-Effectiveness: A Primer, New Perspectives in Evaluation, Volume 4, Sage Publications (1983).

[20]Dorothy Brooten and others, "A Randomized Clinical Trial of Early Hospital Discharge and Home Follow-up of Very-Low-Birth-Weight Infants," New England Journal of Medicine, Vol. 315 (Oct. 9, 1986).

Another program evaluation studied the cost-effectiveness of adding home visiting by nonprofessionals to center-based professional social worker therapy to prevent child abuse and neglect. Families identified as abusive or potentially abusive were randomly assigned to either professional social work therapy services only or a combination of slightly fewer hours of social work therapy combined with home visiting. No families in either group were reported for abusing their children while in treatment. Only 26 percent of the home-visited families dropped out of treatment during 1 year, compared to 50 percent of the families receiving center-based services only. Overall, the home-visited families showed slightly improved outcomes compared to the group that received only center-based social work services.[21]

However, in this case, combining home visiting with center-based social work services almost tripled the cost per client (from $93 to $255 per month). The increased costs were due to giving the home visitors low caseloads (average caseload was 6) and having a separate supervisor for the home visitors, rather than letting the social workers supervise home visitors. Program evaluators suggested that using nonprofessional home visitors could be more cost-effective if the caseloads were increased, full-time home visitors were used, and the home visitors were supervised by the social workers. The evaluation did not analyze long-term costs or savings, such as the longer term significance of retaining more abusive or potentially abusive families in treatment.

While some observers might assume that providing home-based services is likely to be more expensive than providing center-based services, this is not necessarily so. Head Start officials told us that Home-Based Head Start cost less per child in fiscal 1988 ($2,429) than did the average 1989 projected Head Start cost per child ($2,664). However, Head Start provides home-based services not because they are less expensive, but because they bring Head Start to rural children living in isolated areas who might otherwise not have access to a preschool program.

[21]Joseph P. Hornick and Margaret E. Clarke, "A Cost-Effectiveness Evaluation of Lay Therapy Treatment for Child Abusing and High Risk Parents," Child Abuse and Neglect, Vol. 10 (1986).

Poor Program Design Can Limit Benefits of Home Visiting

Not all programs using home visiting to deliver services have been successful. Some programs have not measurably improved maternal and child health, child welfare, and child development. Program evaluators do not always discuss the reasons for program failure. But when they do, the reasons are often tied to specific problems in program design and implementation. By analyzing the literature on home-visiting evaluations and consulting with home-visiting experts and program managers, we identified critical design components that should be considered when developing programs that use home visitors.

Poor Program Outcomes Linked to Design Weaknesses

Some evaluations of programs using home visitors that failed to achieve desired outcomes have identified certain causes for the failure. These include

- failure to use objectives to guide the program and its services,
- poorly designed and structured services,
- insufficient training and supervision of home visitors, and
- the inability to provide or access the range of services multiproblem families need because the program is not linked to other community services.

Several examples illustrate these problem areas.[1]

Child and Family Resource Program

The Child and Family Resource Program, a federally funded demonstration project initiated by the Administration for Children, Youth, and Families, was an ambitious home-visiting program that had little impact on one of its two main objectives. Initiated in 1973, this 11-site, home- and center-based project was designed to strengthen families economically and socially and to improve child health and development. Paraprofessional home visitors helped families access needed social and health services, including basic education and job readiness training, and, through child development activities, taught parents to improve their parenting skills. The program improved mothers' employment and educational status. However, the program did not improve child health

[1]For additional evaluations of programs that were not successful at achieving some key objectives, but for which the causes of failure were not identified or discussed here, see: Earl Siegel and others, "Hospital and Home Support During Infancy: Impact on Maternal Attachment, Child Abuse and Neglect, and Health Care Utilization," Pediatrics, Vol. 66, No. 2 (Aug. 1980); Violet H. Barkauskas, "Effectiveness of Public Health Nurse Home Visits to Primarous Mothers and Their Infants," American Journal of Public Health, Vol. 73, No. 5 (May 1983); Richard P. Barth and others, "Preventing Child Abuse: An Experimental Evaluation of the Child Parent Enrichment Project," Journal of Primary Prevention, Vol. 8, No. 4 (Summer 1988).

and development outcomes for the families randomly assigned to receive program services and only marginally improved parental teaching skills.

Program evaluators identified three design and implementation weaknesses that contributed to the program's failure to improve child health and development. First, home visitors did not pay sufficient attention to all objectives when providing services; they spent most of their time counseling on the need for continued schooling, job training, and employment, instead of balancing this objective with training for parents aimed at improving child development. Although child development was a major program objective, the amount and frequency of child development services provided were low. Second, the quality of child development activities provided may have been inadequate. Home visitors tended not to demonstrate activities so that parents could learn by imitation. Third, program evaluators stated that inadequate training and supervision of home visitors contributed to the program's lack of success.[2]

Boston's Healthy Baby Program

The HHS Inspector General reported in 1989 that Boston's Healthy Baby Program, an ongoing program, had similar weaknesses. The program's goal is to improve birth outcomes by preventing premature birth through health education by home visitors. The Inspector General did not address program effectiveness or collect complete data to determine whether program participation improved birth outcomes. However, the Inspector General reported that the program failed to accomplish four of its service delivery objectives. The program was doing little outreach to enroll the target population, was not consistently assessing risk factors among program participants, was providing services late in pregnancy and not emphasizing all necessary health information, and was not well coordinated with other programs. Many of the program's clients contacted by the Inspector General who had experienced poor birth outcomes, though assessed for risk, had never received program services or had received them only postnatally.

The Inspector General attributed these problems to specific program design and implementation weaknesses. The program's objectives were not guiding the design and development of services. The home visitors were poorly trained and supervised. In addition, the program, serving

[2]Robert Halpern, "Parent Support and Education for Low-Income Families: Historical and Current Perspectives," Children and Youth Services Review, Vol. 10, (1988); Marrit J. Nauta and Kathryn Hewett, "Studying Complexity: the Case of the Child and Family Resource Program," in Evaluating Family Programs, Heather B. Weiss and Francine H. Jacobs, ed., Aldine de Gruyter, New York (1988).

families with multiple problems such as inadequate housing and substance abuse, was located in an agency with little experience in helping such families. The program staff also had not developed effective linkages with prenatal care providers and other social service agencies.[3]

Rural Alabama Pregnancy and Infant Health Program

The Rural Alabama Pregnancy and Infant Health Program, one of five Ford Foundation-sponsored Child Survival/Fair Start programs, had mixed success in meeting its objectives to improve birth outcomes, child health, and child development. This paraprofessional home visitor program improved the use of health care by low-income families, including adequate immunization of client children. But it did not significantly improve infant birthweights, infant health at birth, or infant development, compared to a demographically similar group of children who were not visited.[4]

Program evaluators in 1988 reported three problems with the program. First, compared to other Child Survival/Fair Start programs, the Rural Alabama Program put less emphasis on becoming familiar with the chosen target population of low-income young women and their needs. The program was initially designed to have older, experienced paraprofessional women as home visitors, but found that younger home visitors could establish closer relationships and were more effective with young clients. Second, the program did not have a single structured curriculum of information to teach the clients. Finally, program evaluators concluded that the home visitors needed more supervision.[5]

Prenatal/Early Infancy Project

The Prenatal/Early Infancy Project in Elmira, New York, demonstrated impacts on birthweight, maternal health, reduction in child abuse, and improved maternal education or employment status when it was an experimental research program, but when the local health department

[3]Office of Inspector General, Department of Health and Human Services, Evaluation of the Boston Healthy Baby Program (July 1989).

[4]J.D. Leeper and others, "The Rural Alabama Pregnancy and Infant Health (RAPIH) Program," presented at the 1988 Annual Meeting of the American Public Health Association.

[5]Mary Larner, "Lessons from the Child Survival/Fair Start Home Visiting Programs," presented at the 1988 Annual Meeting of the American Public Health Association; J.D. Leeper and others, "The Rural Alabama Pregnancy and Infant Health (RAPIH) Program," presented at the 1988 Annual Meeting of the American Public Health Association; M.C. Nagy and J.D. Leeper, "The Impact of a Home Visitation Program on Infant Health and Development: The Rural Alabama Pregnancy and Infant Health Program," presented at the 1988 Annual Meeting of the American Public Health Association.

took it over, the program was altered. As a demonstration project, the program had multiple sources of funding, including HHS, the Robert Wood Johnson Foundation, and the W. T. Grant Foundation. When the 6-year grant funding ended in 1983, the local health department absorbed the program, while changing its definition and extent of services, target population, and caseload per home visitor. As a result of these changes, all of the original home visitors left within a few months. One director of county services told us that the program was no longer achieving the same reductions in low birthweight as the original project.

The program's absence of final evaluation data in 1983, reduced financial support, and location within the local health department all contributed to the changes. Some of these changes resulted from a reluctance to invest substantially in a program whose benefits had not yet been fully demonstrated at that time. But a difference in philosophy also prompted the change in program focus. Local officials told us there was not unanimous agreement with the research program's broad health and social service orientation and intensity. They also did not agree with limiting services to the target population of first-time mothers--particularly low-income, unmarried teen mothers—even though these women were among the ones who benefited most from the experimental program. Local officials believed that some minimum level of home-visiting services should be provided to a larger group of pregnant women, which may be diluting the overall impact of the formerly targeted, high-intensity services.

Critical Components for Program Design

Our analysis of these and other evaluations, consultation with experts, and interviews with federal, state, and local program officials point to the importance of sound program design. Further, evidence from these sources suggests that certain program design components are critical to success. Programs using home visiting as an early intervention strategy can be successful at achieving their objectives if program designers and managers recognize the interplay among these critical components.

Information on the success and failure of programs using home visiting can be found in the education, health, and social support literature. Yet we could find no cross-discipline synthesis or analysis of the reasons for these varied outcomes. While no single approach exists for designing successful programs, we have identified critical design components with associated characteristics that appear to be important when designing and implementing programs that use home visiting as a service delivery strategy. These key components include

- clear and realistic objectives with articulated program goals and expected outcomes,
- a well-defined target population with identified service needs,
- a plan of structured services designed specifically for the target population,
- home visitors trained and supervised with the skills best suited to achieve program objectives,
- sufficient linkages to other community services to complement the services that home visitors can provide,
- systematic evaluation to document program process and outcomes, and
- ongoing, long-term funding sources to provide financial stability.

In operation, these components are not independent of one another. They must work in harmony, as part of an overall program design framework. The next chapter describes in more detail a framework that we developed to guide program design and management. In addition, we illustrate, through case studies, how programs with varying objectives, services, and types of home visitors used these critical components to strengthen program design and operation.

A Framework for Designing Programs That Use Home Visiting

Home visiting evaluators, experts, and managers point to certain common characteristics among diverse program designs as prerequisites to achieving program goals. To illustrate how these characteristics can be used as a framework in designing and operating programs using home visitors, we reviewed eight programs operating in the United States and Europe that appeared to be successful in meeting their stated objectives. (See app. I for more detailed information on these programs.)

These eight programs commonly used home visitors to deliver services, yet varied in other ways. They differed in objectives, in the group they targeted for services, and in the types of services provided. Some operated in rural areas, others in urban areas. Some used professionals, such as registered nurses and social workers, while others used non-college-educated paraprofessional community women. (See table 5.1 for highlights of differences.) Despite these differences, these programs illustrate the importance of certain design characteristics. In general, these programs' managers

- developed clear objectives, focusing and managing their operations accordingly;
- planned service delivery carefully, matching the home visitor's skill level to the service provided;
- worked through an agency with both a health and social support outlook to provide families with a variety of community resources either directly or by referral; and
- developed strategies for ongoing funding to sustain program benefits over time.

From these characteristics, we developed a framework for developing and managing programs that use home visiting. The framework's constituent parts, shown in figure 5.1, include clear objectives, structured service delivery procedures, integration into the local service provider network, and secure funding over time.

Table 5.1: Characteristics of United States and European Programs GAO Visited

Program name	Area served	Population served	Type of home visitor[a]
United States			
Resource Mothers for Pregnant Teens, South Carolina	Rural	Pregnant teens, teen mothers	Paraprofessional
Center for Development, Education, and Nutrition (CEDEN), Austin, Texas	Urban	Developmentally delayed children	Professional
Changing the Configuration of Early Prenatal Care (EPIC), Providence, Rhode Island	Urban	Pregnant low-income women	Professional
Southern Seven Health Department, Southern Illinois	Rural	Pregnant teens	Professional
Maternal and Child Health Advocate Program, Detroit, Michigan	Urban	Pregnant women; mothers with high-risk newborns	Paraprofessional
Roseland/Altgeld Adolescent Parent Project (RAPP), Chicago, Illinois	Urban	Pregnant teens; teen mothers	Paraprofessional
Europe			
Great Britain Health Visitor	Nationwide	All newborns	Professional
Denmark Infant Health Visitor	Nationwide	Newborns[b]	Professional

[a]Professional includes individuals with postsecondary degrees in either a specialized area, such as nursing, or a broader field, such as early childhood education or social work. Paraprofessional includes individuals with no postsecondary certification or specialized training.

[b]All newborns in municipalities that hire home visitors (90 percent of all newborns).

Figure 5.1: Framework for Designing Home Visitor Services

Clear Program Objectives

Objectives, clients, and services are interdependent
Objectives as a management tool

Structured Program With Appropriate Home Visitor Skills

Structured service delivery plan
Home visitor skills matched with services
Training and supervision tailored to home visitor needs

Comprehensive Focus With Strong Community Ties

Services linked with other local providers
Agency supports multifaceted approach

Secure Funding Over Time

Plan for program continuity

Clear Objectives as a Cornerstone

Clear, precise, and realistic objectives are crucial for enabling programs using home visiting to sustain program focus among the home visitor staff and to deliver relevant services to an appropriate client population. Developing such objectives forms the foundation for determining specific services and identifying the target population. Well-articulated objectives also allow programs to develop outcome measures for monitoring progress.

Objectives, Target Populations, and Services Are Interdependent

Objectives, target populations, and services are logically interconnected program elements. As program managers develop objectives in response to problems, such as infant mortality or child abuse, they also begin to identify the client needing help and the type of services that will suit the client. The Center for Development, Education, and Nutrition (CEDEN), for example, developed a program using home visiting to address an expressed local need. It was created in 1979 in response to a survey of families in East Austin, Texas, that identified delayed child development as a pressing community problem. To address children's developmental delays, program managers selected as a target population children most likely to benefit from program services--those under age 5, with an emphasis on those under age 2. This selection was based not only on the expressed need of the community, but also on an assessment of those most likely to benefit from the proposed services—in this case, very young children, who are more responsive than older children to measures for preventing and reducing developmental delay.

Program managers must be realistic in developing objectives and services. In some instances it may not be possible—or practical—to meet the needs of all the program's target population, especially those at highest risk. Roseland/Altgeld Adolescent Parent Project (RAPP) in Chicago helps pregnant and parenting teens with parenting skills and self-sufficiency. The program does not accept certain members of its target group who have severe problems, such as mental or emotional disorders or substance abuse. Program officials do not think these women would benefit from the program because the program services are not intense enough to help them. RAPP refers women with these problems to other programs. The program also does not serve teens who have strong family support and who function well independently.

In programs that use home visiting, objectives serve as the basis for determining the frequency of visits and duration of services. CEDEN, for example, has determined that most children will have achieved normal or better levels of development after 24 to 34 weekly home visits, so

that is the expected length of program services. The number of visits per child and specific goals and activities vary, however, according to the child's individual needs.

Objectives as a Management Tool

Clear objectives also serve as the basis for determining outcome measures used in program monitoring and evaluation. For example, if a program's objective is to reduce the incidence of child abuse among violence-prone families by teaching appropriate discipline methods, then comparing the number of reported abuse incidents among families receiving program services to incidents among similar families not receiving program services is one logical measure.

Managers use outcome measures derived from program objectives to monitor program performance and to make changes. CEDEN examines information collected from children at entry, mid-program, and exit on perceptual abilities, fine and gross motor skills, language skills, and cognitive development to measure progress toward its objectives of preventing or reversing developmental delay. It also compares entry and exit statistics for well-child checkups, immunizations, illness and hospitalization rates, and the number of children with medical coverage to measure progress toward objectives related to improving the health of program children.

RAPP also measures progress quarterly by determining whether its clients receive certain services. For example, to monitor its objective of increasing well-baby care, RAPP measures the number of infants getting regular health screening. During the 1989 fiscal year, the program had already exceeded its annual goal of 175 total screenings for all clients by the end of the third quarter.

Periodic monitoring serves at least two purposes. First and foremost, it demonstrates whether a program has met its goals. Second, program objectives, target population, and services can be modified if needed. The monitoring experiences of CEDEN and South Carolina Resource Mothers serve to illustrate how monitoring provides important information to managers.

At the time of our review, preliminary results from an external evaluation of CEDEN showed that the program was effective in reducing developmental delays in client children. Further, CEDEN's executive director said that preliminary results suggest that the program should

- emphasize referring both children and mothers to appropriate health and human service programs,
- focus on efforts to follow up on families in order to complete more home visits, and
- begin to follow up on families no longer in the program to determine if gains in development are sustained.

South Carolina's Resource Mothers program has been involved in a number of evaluations. These show that the program has been more successful at meeting some objectives than others. A 1986 evaluation showed that teens visited by Resource Mothers had fewer low-birthweight babies than teens in nearby counties who did not have access to the program. However, a 1989 evaluation showed that the program has not been as successful in such areas as encouraging mothers to breast-feed their babies, enroll early in family planning, and immunize their children at the appropriate times. The state coordinator said that program managers will use the evaluation results to determine if any of the objectives should be changed.

Each of the six U.S. case studies we reviewed had evaluation components, although they differed in the level of sophistication. None, however, had completed evaluations that compared costs to relative benefits. Therefore, program managers could not clearly document the cost savings that each believed they were achieving.

Structured Program Delivered by Skilled Home Visitors

A "structured" service delivery approach—one that has defined activities and a sequenced plan for instruction with a detailed curriculum or protocol—serves as a blueprint for guiding home visitor services. The degree of service structure, such as using written curricula or making a specified number of visits, can depend upon program objectives and whether professional or paraprofessional home visitors are used. Programs with multiple and complex objectives, such as reducing children's developmental delays, benefit from a plan that details service activities. Programs delivered by paraprofessional home visitors also benefit from more planned service activities.

The skills of the provider need to match the services provided. Programs that deliver technical services, such as medical and psychological examinations, require highly trained, professional home visitors. On the other hand, programs that deliver information and provide referrals to other service agencies do not need as highly trained home visitors.

Structured Service Delivery

Structuring services with a written curriculum can be particularly advantageous for programs using home visitors. Reviews of multiple early intervention program evaluations have shown that programs using structured interventions and written curricula were more likely to improve children's development. Officials of programs we visited said that structured service delivery

- promotes the guidance of services by objectives,
- fosters consistency and accuracy of information provided to clients, and
- enables home visitors and their supervisors to systematically plan future services for clients.

Despite this evidence, one survey of home-visiting programs indicated that only a third used written curricula. Four of the six U.S. programs we reviewed used structured curricula—each one developing its own. The Resource Mothers program, which uses paraprofessionals, is highly structured. The program has a detailed set of protocols that describes the information to be covered during each visit. Generally, each client receives the same services on the same schedule—tied to month of pregnancy and age of the baby. The home visitor can deviate from this plan, however, to deal with a client's particular needs.

The Illinois Southern Seven program, which uses professionals, is less structured. It provides numerous services—referrals, emotional support, education on prenatal care and parenting skills, and well-baby assessments—without structured protocols to follow during visits. Southern Seven also does not prescribe the frequency or minimum number of home visits necessary to meet program objectives. Home visitors decide how many visits are needed based on a risk assessment done for each client.

Despite variations in the level of service delivery structure, home visitors, their supervisors, and program managers agreed on the need to be flexible during the home visit. Responding to a family's most immediate concerns is important for building a helping relationship. During one GAO site visit, for example, a home visitor had planned to work with a child for 1 hour but instead spent 4 hours helping a family member receive emergency medical care.

Match Between Program Services and Home Visitor Skills

The experience of home-visiting experts reinforces what appears to be intuitively true: programs delivering specialized, technical services need to use educated and skilled home visitors. British health visitors, for example, provide hands-on medical services in the home, such as head-to-toe examinations of newborns 10 to 14 days old. Because Denmark's and Great Britain's health-visiting services focus on both preventive health and secondarily deal with mental, social, and environmental factors that influence family behavior, these nurses have medical, social service, and counseling backgrounds.

Austin's CEDEN services are tailored by the home visitors for each child's diagnosed developmental delay. Home visitors develop their individualized services by picking from a number of different activities. The staff are college graduates trained in a variety of disciplines, including social work, psychology, and nursing. The executive director affirmed that the home visitors' independent planning and assessments required this level of education.

Many services, while not requiring highly skilled professionals for their effective delivery, do require trained paraprofessionals. Detroit's Health Advocate home visitors, for example, teach pregnant clients about proper eating habits, infant care, problem solving, and birth control. They assist new clients to meet their basic needs first, since some clients lack food, clothing, income, or shelter.

Training and Supervision Tailored to Home Visitor Skills

Programs we visited using paraprofessional home visitors generally provided more training—both before (preservice) and after (in-service) home visiting began—than did programs using professionals. Detroit's Health Advocate program provided a full-time, preservice, 6-week training course, including such topics as human development and use of community resources. Chicago's RAPP provided preservice training entailing a week of program orientation and a month of supervised, on-the-job training.

Both programs also provided in-service training. The Health Advocate's training coordinator regularly discussed in-service training needs with home visitors and their supervisors. RAPP paid for external training and encouraged its home visitors without college degrees to pursue further education.

Programs we visited using highly trained, professional home visitors tended to provide less direct training. For example, the Changing the

Configuration of Early Prenatal Care (EPIC) project in Providence, Rhode Island, used nurses from the Visiting Nurse Association, Inc., with bachelor of science nursing degrees. Because each nurse home visitor had medical training, knowledge of community resources, and at least 8 years of home-visiting experience, the project director did not view extensive training as a critical program component. Nurses were oriented to the program but not otherwise trained.

British health visitors require little additional training because they are extensively trained and credentialed before they can join a district health authority. Experienced registered nurses with community nursing experience receive an additional 51 weeks of home visitor classroom and supervised field training. They are credentialed through a national system before joining the ranks of the District Health Authority's home health visitors.

Program officials, managers, and home visitors we contacted—regardless of program objectives—often talked about the need to be adequately trained and prepared in a variety of areas in order to be responsive to their clients' multiple needs. Some spoke specifically about advantages associated with cross-training—formal joint training for home visitors of various disciplines—and the development of a core training curriculum that would be appropriate for all home visitors. The British health visitor and home-based Head Start training materials are examples of core curricula that other programs using home visitors might adopt.

A common personnel component among all home visitor programs was a stated need for supervision and support. Program officials saw home visiting as a stressful occupation. Both home visitors and their supervisors believed that supervisors play a critical role in relieving stress and providing advice on how to work with clients and handle caseloads. Most of the officials of programs we visited in the United States that use both professional and paraprofessional staff agreed that the latter require closer supervision. The Detroit Health Advocate program experienced early difficulty with its choice of home visitors—former AFDC mothers. Program managers and supervisors found that these home visitors experienced difficulties adjusting to their new responsibilities and required more support and supervision than initially anticipated.

Detroit's Health Advocate supervisors accompanied their paraprofessional home visitors at least once a month, reviewing each case with the visitor before the next visit. In contrast, British home visitors are

expected to work independently with little day-to-day supervision. British supervisors have multiple duties, such as hiring new staff and allocating nursing resources, and therefore spend limited time on reviewing individual cases. In Denmark, local health authorities are not required to hire supervisors for home visitors; in 1986, 69 percent of 277 municipalities had not hired supervisors.

Strong Community Ties in a Supportive Agency

Home visitors can help clients overcome some access-to-service problems by coordinating or providing needed services. In their coordination role, home visitors act as case managers for their clients by locating and helping their clients obtain varied services from different sources. To do so, home visitors develop techniques to link clients with various community programs and service providers. Programs using home visiting benefit from being located in agencies supportive of and experienced with providing combined health, social, and educational services to families.

The success of home visitors in coordinating services for clients depends largely on the availability and quality of community resources. In areas where services are limited, home visitors can help women get access to what care is available. However, home visiting does not substitute for other needed services, such as prenatal care.

Linkages With Other Programs

Home visitors need to be familiar with the community's health, education, and social services network and must develop relationships with individual providers in order to link clients with needed community services. Sometimes home visitors accompany clients to an agency office to help them make initial contacts with agency staff. They also provide clients with reference materials listing community resources.

Detroit's Health Advocate program developed links to community resources by participating in provider networks. The program's managers belonged to a number of local service networks, such as Michigan Healthy Mothers, Healthy Babies and Detroit/Wayne County Infant Health Promotion Coalition. The goal of these organizations was to promote better overall community access to prenatal care. Health Advocate managers helped organize local prenatal clinics into a network that met regularly to find ways to improve access to care.

The CEDEN program also relied on other agencies and organizations for services to complement its own. CEDEN maintained a computer-based

system of about 200 agencies offering such services. CEDEN's home visitors learned local agency procedures so they could help clients complete forms correctly. Home visitors had specific contacts within the agencies administering WIC and Medicaid, for example, whom they could call on to link clients with services. Like the Health Advocate program managers, CEDEN officials were members of various committees and councils that addressed the educational, social services, and medical needs of Travis County (Austin) residents. These included the Early Childhood Intervention Forum and the Austin Area Human Services Network.

U.S. program managers we visited that used home visiting said that it was important to link their programs with other service providers in the community. Often programs are not designed to provide comprehensive services, and clients may not know where to go for help or may need encouragement to go. U.S. program managers believed this linkage was a critical part of their programs' success.

In contrast, British and Danish health officials did not believe that the success of their health-visiting programs is as dependent on the strength of the local service community. In Great Britain and Denmark, health visitors work as a part of a community-based primary health care team consisting of a general practitioner, a midwife, and a home visitor. As a result, they do not depend on referrals to coordinate medical care as U.S. programs do. For other services, however, health visitors maintain a close working relationship with certain community support agencies. When British health visitors are confronted with particular problems, such as child abuse, they report the family to social services. The family's home visitor meets monthly with police and social services to coordinate home-visiting services with social and protective services for the child.

Location Within Supportive Agency

Programs that used home visiting often had mixed social, health, and child development objectives. These programs are enhanced when housed in agencies supportive of the delivery of multifaceted services. We visited programs with different types of agency affiliation—administered by a social service agency within a health department, a university, or an agency experienced in delivering family services addressing various problems. All of these agencies were supportive of the programs' multiple objectives and family-centered approach.

The local health department's division of social services operates the Southern Seven program. This organizational arrangement seems to

enhance the home-visiting program's ability to meet both its social support and health-related objectives. In addition, clients have greater access to the department's other services, such as prenatal care.

In the Resource Mothers program, each supervisor has a master's degree in social work and is primarily responsible to the local health department's social work director. The health department provides such services needed by Resource Mothers clients as prenatal care and family planning services. In some locations, the South Carolina Department of Social Services has an employee located in the local health department so people can apply for Medicaid without going to the local Department of Social Services office.

Catholic Charities' Arts of Living Institute is the parent organization for RAPP. This private, nonprofit organization develops and operates programs for pregnant teenagers and coordinates with other agencies to deliver services that they cannot directly provide. Since Catholic Charities has expertise in delivering services related to RAPP's goals, it can advise and assist RAPP on how to best achieve program goals.

Home Visiting Does Not Substitute for Lack of Services

Regardless of how well services are coordinated, programs providing supportive services through home visiting do not substitute for some gaps in community services. A clear example is prenatal care. Women who obtain inadequate prenatal care are less likely to have a healthy birth outcome than women who obtain adequate care. While the Institute of Medicine recommends that programs providing prenatal care to high-risk women include home visiting, it recommends that the first task for policymakers is making prenatal care more accessible to all.

Programs that use home visiting can help women access what care is available. Southern Seven officials said prenatal care and hospital delivery services are inadequate in their rural Illinois area. No hospital in the 2,000-square-mile area served by the program provides delivery room services. Only four local doctors provide prenatal care, and two of them do not participate in Medicaid. Program officials transport their clients to doctors inside and outside the seven counties to help them obtain needed care. The nearest hospitals with delivery facilities are in Missouri and Kentucky, but these states do not accept Illinois Medicaid. Medicaid beneficiaries therefore have to drive 40 to 60 miles to Carbondale to deliver their babies. Although, for legal reasons, Southern Seven home visitors are not allowed to transport women in labor, they make

sure such women have transportation to the hospital by ambulance if no other means are available.

Southern Seven was the only program we visited that cited such a serious gap in medical services. The other programs cited other service gaps, such as inadequate public transportation, mental health and drug rehabilitation services, child care, and affordable housing.

Ongoing Funding for Program Permanency

Developing strategies to secure ongoing funding strengthens home-visiting services by giving programs time to establish themselves in the community, build and maintain relationships with clients and other providers, and maintain steady program operations. Since it takes time to demonstrate a program's effect, secure funding gives it an opportunity to do so. But three of the six U.S. programs we visited were developed as time-limited projects,[1] without guaranteed sources of continuing funding. Two of these ceased operation by the end of 1989. The other four programs, however, successfully developed strategies to maintain services in an uncertain funding environment.

Time Needed to Implement and Demonstrate Effectiveness

Developing, implementing, and evaluating the impact of home-visiting services while maintaining continuity of services takes several years. Three-year or shorter funding cycles put considerable pressure on programs to achieve complete operational status and show some positive effects before ending. Based on the experience of many programs using home visiting, experts have concluded that funding insecurity is one of the basic sources of unpredictability and unevenness in delivering home-visiting services.

Uncertain funding contributes to operational problems in home-visiting services. It can result in high turnover which, in turn, is disruptive to service, increases the need for training, and contributes to program instability. The Health Advocate program, for example, had a serious turnover problem, partially due to its initial way of paying home visitors.

At the beginning, the program's home visitors, who were AFDC recipients, were given supplementary Volunteers in Service to America

[1]EPIC, Resource Mothers, Health Advocates.

(VISTA)[2] payments instead of becoming regular salaried employees. When other local health departments established programs similar to Health Advocates using paraprofessionals, Health Advocate home visitors moved to these more secure jobs. None of the 21 original nome visitors who started in early 1987 were still visiting clients in August 1989. Consequently, the program lost clients because some, having established a rapport with the first home visitor, did not want to continue the program once "their" home visitor left. The Health Advocate program had to train additional home visitors to keep an ongoing staff.

Some U.S. programs we visited needed funding for longer than 3 years if they were to continue services and demonstrate their effectiveness. Although the first formal Resource Mothers program evaluation demonstrated that clients had better birth outcomes, for example, it was not completed until more than 5 years after the initial research program began. By that time, the original 5-year foundation grant had expired, and the program was operating through a 3-year federal Special Projects of Regional and National Significance (SPRANS)[3] grant. Had the Resource Mothers program not received a second grant, the results of the original evaluation could not have been used to help secure further funding.

Providence's EPIC program also received a 3-year federal SPRANS grant, from October 1986 to September 1989. During those 3 years, program officials developed, implemented, and completed the program. They also began but did not complete its evaluation. They stopped providing program services in June 1989. The program was planned as a research project to see if nurse home visiting between weeks 20 and 30 of pregnancy could improve birth outcomes. Although no immediate state commitment to such funding was sought, health officials may seek longer term funding to restart the program if it proves to have been effective. Final evaluation results were expected by spring of 1990, about 1 year after program services were terminated.

The Health Advocate program was also a 3-year project that closed its doors in October 1989 with its evaluation to be completed later. Program officials were awaiting evaluation results to determine the impact of the home visits on their clients. In the meantime, the program has been partially replicated by some local health departments that saw its benefits

[2]VISTA provides small stipends to full-time volunteers who work for governmental or nonprofit agencies on projects to improve the lives of the poor.

[3]These projects are funded by a federal set-aside of between 10 and 15 percent of the MCH block grant appropriation.

and merits, and program staff have begun a new, community-based maternal and child health home-visiting effort.

CEDEN, a private, nonprofit organization, has had more stable funding over its 10-year existence than some of the other programs. According to the executive director, this has allowed the program to establish ongoing relationships within the community, with other service providers, and with clients. CEDEN is well known and well respected by members of the community and other area service providers. As a result, many CEDEN clients are referred from diverse sources—other social service providers, medical providers, police, family violence programs, churches, other institutions, and previous clients.

Historically, Great Britain has not had the kind of funding uncertainty as have some U.S. programs. Since home visiting is one component of community health services provided by the National Health Service, it is a firmly established part of the local community. Home visiting has a long tradition in Great Britain and is a respected profession. As a result, home visitors serve as a common point of reference in the community, sources of standard information, advisors on health, and overseers of child welfare.

Funding Strategies Needed to Maintain Services

The U.S. programs we visited that were able to maintain continuous funding of program services followed two strategies. These entailed developing diverse funding sources, either by themselves or through sponsoring organizations, and designing programs to be more closely integrated into the community. Programs that did not maintain services after initial funding ended generally depended solely on 3-year research demonstration grants.

Developing diverse funding sources was one strategy for coping with funding uncertainty. Home visitor programs have the potential to tap diverse funding sources because the potential funding for early intervention is so diversified. CEDEN, a community-based agency, has obtained, in addition to federal, state, and local funds, funding from private foundations like the Ford Foundation and The March of Dimes Birth Defects Foundation, nongovernmental grants from the United Way and Junior League, and corporate contributions from IBM and Motorola. According to CEDEN's executive director, a diverse funding base prevents the loss of one funding source from disrupting the program.

RAPP and Southern Seven also benefit from diverse funding sources developed by The Ounce of Prevention Fund, itself a major funding source. The Ounce of Prevention Fund is a public-private consortium, with funding from various governmental sources, foundations, and private sector contributions. Because of such diverse funding sources, RAPP and Southern Seven program administrators are freed from having to search independently for funding. As a result, they can devote their efforts to program management.

Designing programs to be integrated into the community, thereby building local support and commitment for the program, is another strategy that can lead to more stable funding. The Resource Mothers Program was introduced into rural communities through town meetings. Community groups involved themselves in finding and funding local operation sites. The program became an established part of local community services and was able to successfully replace demonstration project funding with more ongoing state-administered funds, such as the MCH block grant and other state funds.

Conclusions, Recommendations, and Agency Comments

Conclusions

Home visiting is a technique widely used in both the United States and Europe to provide families with preventive, in-home services. Home visitors provide a broad range of services, including home-based assessments, education, emotional support, referrals to other services, and, in some cases, direct care.

In Great Britain and Denmark, home visiting is part of a universally available system of health care. Great Britain's and Denmark's publicly financed, community-based health care systems offer home-visiting services, without charge, to virtually all families with young children. In these countries, public health nurses provide primarily health education and emotional support, with some developmental assessments and direct care, such as newborn health checkups.

Home visiting is different in the United States. In contrast to the European countries we visited, no single federal home-visiting program or federal focal point for home visiting exists; rather, the federal government funds home visiting through many agencies and programs. In the United States, home visiting may be conducted by professional nurses, social workers, child development specialists, or paraprofessionals (lay workers). Home visiting in the United States usually targets families with specific problems, such as families with handicapped children or abusive families.

Despite the variations in philosophy and approach, the goals of home visiting in both the United States and in Europe are similar: improved child health, welfare, and development. We believe that home visiting can help families become healthier, more productive, and self-sufficient, given certain conditions. Our conclusions about home visiting services in the United States follow.

- **Home visiting can be an effective strategy for reaching at-risk families typically targeted by early intervention programs.**

Evaluations of programs that used home visiting have demonstrated that this strategy can improve the health and well-being of families and children who often face barriers to care. Clients of some home-visiting programs have had healthier babies. Home-visited children have improved in intellectual development. Projects working with parents likely to abuse or neglect their children have been able to reduce reported abuse and neglect.

Given limited public resources, we believe that home visiting should be targeted to specific populations most likely to benefit from these personalized services. These might include young, poor mothers, particularly single mothers; they have clearly benefited from past programs. Children who are handicapped, developmentally delayed, at risk of abuse and neglect or poor health and development, or live in rural areas also have been shown to benefit from home-visiting services. One way to target without stigmatizing the service is to make home visiting universally available in neighborhoods with high concentrations of at-risk families.

The public costs associated with problems faced by these vulnerable children and families are high. While cost data are limited, evaluations have shown that home visiting can reduce other costs. But little is known about the cost-effectiveness of home visiting, compared to other settings or strategies for providing similar services.

Despite home visiting's potential effectiveness, it is not a panacea for the problems disadvantaged families face. Home visiting can help families overcome some of the barriers to care that they face, such as not understanding the need for preventive services or not being able to gain access to services on their own. But home visiting cannot make up for lack of available community services, such as prenatal care providers, hospital delivery services, substance abuse treatment services, Head Start services, or affordable housing. For communities with troubled populations and limited services, home visiting alone may not be the appropriate intervention strategy.

- **Successful programs using home visiting share common characteristics that strengthen program design and implementation.**

The benefits of home visiting depend on certain program design characteristics. Health, educational, and family support programs that use home visiting need clear and realistic objectives. Precise objectives help sustain program focus and form the basis for determining the most appropriate services for the needs of a target population, as well as program outcome measures. Home-delivered services should have well-articulated and defined activities with a sequenced plan for presentation to the client. Programs delivering specialized and technical services in the home, such as well-baby health checkups or specialized child development services, need more structure and more educated, skilled visitors than programs delivering information, support, and referrals to other providers. Home visitors need solid pre- and in-service training

and close supervision from professionals. This program support is particularly important for paraprofessionals, but professionals also benefit from supportive supervision and training.

We believe that no single "best" home-visiting model or approach exists. Home visiting can take a variety of forms—varying in terms of who provides the services (professional or paraprofessional), what services they provide (hands-on services or referrals to other providers), and how frequently services are provided (single assessment visits or sustained visiting over 1 or more years)—depending on the objectives, target population, and expected outcomes. The critical point is to match objectives and services to the target population's needs and to the home visitors' skills and abilities.

To have sustained impact, programs using home visiting need to develop strategies for securing ongoing funding and become permanent institutions within the community. Ongoing funding sources provide financial stability and increase a program's longevity, community acceptance, and client participation. Medicaid is one such source of ongoing funding. State funding, such as support for handicapped education, is another. To become a more permanent part of the local service structure, programs using home visiting need to be located within agencies or departments that can be supportive of interdisciplinary programs that offer both health and social services and are willing to make a commitment to ongoing service delivery. Programs using home visiting need to link closely with other community services, to help home visitors be effective case managers.

- **The federal government's commitment to home visiting can be better coordinated and focused.**

Both the Congress and executive agencies appear to agree that home visiting can be a viable service delivery strategy, and have provided funding through numerous agencies and programs. The federal government, however, needs to better focus and coordinate its efforts to improve program design and operation. The government should also play a greater role in communicating program successes and lessons learned from perceived failures, to adequately design, implement, and evaluate programs. We believe this can be done through existing resources and mechanisms.

The Congress has indicated its interest in home visiting in recent legislation. The Omnibus Budget Reconciliation Act of 1989 authorized a new

federal set-aside from the MCH block grant for maternal and infant home-visiting demonstration programs, among other projects. Funds will become available when the block grant appropriation exceeds $600 million (currently at $561 million). Twenty-four states have used the Congress' recent Medicaid expansions to offer home visiting as part of Medicaid-covered enhanced prenatal and/or postnatal care services. Home visiting is not, however, a specific Medicaid-covered service. The Congress considered making home visiting an explicitly covered service for high-risk pregnant women and infants in the last session, but the proposal did not survive reconciliation. The Congressional Budget Office has estimated that the additional federal costs of amending the Medicaid statute to explicitly cover home visiting for high risk pregnant women and infants when prescribed by a physician would range from $95 million for fiscal years 1990-94 if home visiting was an optional service to $625 million if mandatory.

HHS and the Department of Education have mechanisms for collaborating with states and localities and helping them develop programs for providing early intervention services to children. The Federal Interagency Coordinating Council is one mechanism for sharing information at the federal level on successful service approaches and for cooperating on joint projects. It has already been involved in one national conference on home visiting. With its emphasis on interagency and intergovernmental collaboration for family support programs, FICC appears to be a ready focal point for further home-visiting initiatives, especially information exchange. Other federal mechanisms that can support home visiting include existing clearinghouses and technical assistance to states, localities, and providers to help them initiate home-visiting services or to improve current services.

One area that needs focus is training and service curricula. Programs that we visited often developed their own curricula. Programs could benefit from existing materials, such as The Head Start Home Visitor Handbook. Federal agencies that fund home visitors could pool resources to develop comprehensive training curricula, training materials, and visiting protocols that local programs could use or adapt. Well-developed training and visiting protocols would both improve home-visiting practices and decrease the start-up time and costs for new programs.

Federal demonstration projects could be better focused to improve program practice and fill information voids. This might include stepped-up federal efforts to encourage the integration of home visiting into

existing community service networks where particular program approaches have proven to be effective or to require grantees to develop concurrent or subsequent funding streams in order to continue services after the demonstration period. Federal demonstrations need to focus on evaluating the costs and future cost savings associated with home visiting, not just the efficacy of alternate service delivery strategies. Finally, federal program managers need to encourage the replication of proven, effective program designs in other communities.

Matter for Congressional Consideration

The Congress has expressed its interest in home visiting as a strategy for bolstering at-risk families. In view of the demonstrated benefits and cost savings associated with home visiting, the Congress should consider establishing a new optional Medicaid benefit: as prescribed by a physician or other Medicaid-qualified provider, prenatal and postpartum home-visiting services for high-risk women, and home-visiting services for high-risk infants at least up to age 1. Making home visiting an explicitly covered Medicaid service to improve birth outcomes will encourage states to provide ongoing funding for prenatal and postpartum home visiting.

Recommendations

We recommend that the Secretaries of HHS and Education require federally funded programs that use home visiting to incorporate the following program design elements:

- clear objectives, which are used to manage program progress and to evaluate program outcomes;
- structured services by trained and supervised home visitors whose skills match the services they deliver;
- close linkages to other service organizations to facilitate access to needed services; and
- commitments for further funding beyond any federal demonstration period to sustain benefits beyond short-term initiatives.

More specifically, the Secretary of HHS should incorporate these program design components when implementing provisions of the Omnibus Budget Reconciliation Act of 1989 (P.L. 101-239) pertaining to new home-visiting demonstration projects.

We further recommend that the Secretaries of HHS and Education:

- make existing materials on home visiting more widely available through established clearinghouses, conferences, and communications with states and grantees.
- provide technical or other assistance to programs to more systematically evaluate the costs, benefits, and future cost savings associated with home-visiting services.
- give priority to collaborative, interagency demonstration projects designed to (1) meet the multiple needs of target populations, (2) incorporate home visiting permanently into local maternal and child health and welfare service systems, and (3) replicate models that have demonstrated their efficacy.
- charge the Federal Interagency Coordinating Council with the federal leadership role in coordinating and assisting home-visiting initiatives through such activities as (1) providing technical assistance in developing program services and program evaluations and (2) supporting the development of a core curriculum for home-visitor training.

Agency Comments

HHS and the Department of Education generally concurred with our conclusions and recommendations. They supported our characterization of home visiting as a strategy to provide early intervention services to certain targeted populations, and not a stand-alone program. The departments agreed with the need to more systematically evaluate programs incorporating home-visiting services and provided examples of cost evaluation studies in process. These cost studies may help fill some of the current knowledge voids, provided their results are well publicized and easily accessible. They also indicated they will attempt to make home-visiting materials more widely available through existing mechanisms, such as established clearinghouses.

Both departments recognized the merit of the design elements that we recommended be incorporated into programs that use home visiting. HHS stated it will apply them to home-visiting services provided through the MCH block grant and will consider their applicability to other departmental programs. Although Education provided examples where some of the design elements are already incorporated as program funding criteria, the department believes that more systematic research is needed to identify which variables are causally related to specific outcomes and suggested that the efficacy of these components be verified through research rather than requiring that they be included in every program funded.

We believe that these program design elements—developed through an extensive literature review, consultation with experts, and case study analyses—reflect sound management principles that should be considered when designing and managing programs that incorporate home visiting. For this reason, we do not believe additional research is needed to demonstrate the causal link between these general design elements and overall program success. But we agree that identifying the relative effectiveness of variations within these design elements—such as the optimal type of home visitor considering stated goals and target populations or the nature and intensity of services—may warrant further research and evaluation.

Both HHS and Education agreed with our recommendation to give priority to federal demonstration projects that meet the multiple needs of target populations and replicate models of proven efficacy. But both were hesitant to give priority to home visiting over other early intervention approaches or settings, in the absence of conclusive evidence of its relative effectiveness. We agree that priority should not necessarily be given to home visiting over other effective approaches. Our intent was to emphasize the importance of integrating effective services into existing local-level service delivery systems on a continuing and sustained basis, rather than continuing to fund short-term, finite, experimental research and demonstration projects with little lasting community value.

HHS did not fully concur that FICC should have the federal leadership role in coordinating and assisting home-visiting initiatives, believing this to be somewhat beyond FICC's stated mission of serving handicapped children. As discussed on pages 24-25, FICC has already conducted high-profile activities related to home visiting and appears to be an established interagency mechanism that could facilitate the federal government's involvement with home-visiting activities. This role appears to fit within FICC's stated goal of developing action steps that promote a coordinated, interagency approach to sharing information and resources, especially materials, resources, training, and technical assistance to agencies and states serving children eligible for services under Public Law 99-457.

HHS did not agree that amending the Medicaid statute to cover home visiting as an optional service was necessary. It pointed out, as did we on page 26, that states essentially have that option, since some types of home visiting are presently covered under different categories of service. But we believe that explicitly making home visiting an optional

covered service would send a clear message to the states about the efficacy of home visiting as a preventive service delivery strategy and would encourage its use, particularly for high-risk pregnant women and infants.

Finally, HHS commented on the scope of our review. HHS believed we did not adequately address the different contexts in which U.S. and European programs using home visiting operate. In chapters 2 and 6, we characterized these different operating environments, especially noting Great Britain's and Denmark's systems of universal, publicly financed, community-based services, available to all regardless of family income. But rather than focusing on such contextual differences between Europe and the United States, we used the case studies to analyze the commonalities in the content and methods of delivering services in the home, which were similar in many respects in all locations visited.

HHS also suggested that a more thorough discussion of the pros and cons of building home-visiting programs around public health nursing would have been helpful. We agree that this approach may have merit for some communities and some objectives. But the public health nurse is only one model of home visiting; its focus on public health services delivered by professional nurses may be ill suited for other early intervention programs with differing objectives. The key, as Education commented, is that states and local providers should have the flexibility to decide which mechanisms and settings are appropriate to meet the individual needs of the children they serve in their communities.

We have incorporated the departments' technical comments into our report where appropriate.

Description of the Eight Home-Visiting Programs GAO Visited

This appendix provides programmatic and administrative details about the eight home-visiting programs GAO visited in the United States and Europe. The programs are presented in order of length of existence, with the U.S. programs first. Each description includes the following:

- A background section, which highlights the history of the program, its goals and objectives, and the target population.
- A services and activities section, which describes the services provided in the home and the type of service provider.
- A results section, which describes evaluation efforts and results.
- A section describing the program's funding, costs, and benefits.
- A section describing officials' views about the program's future.

Center for Development, Education, and Nutrition

Table I.1: Program Profile: Center for Development, Education, and Nutrition (CEDEN)

Geographical areas served:	Austin and Travis County, Texas
Goals/objectives:	Prevent/reverse developmental delay; promote family self-sufficiency
Administrative agency:	Private, nonprofit
Service delivery method:	Home visiting, group meetings
Target population:	Developmentally delayed children up to 60 months of age and their families
Number and timing of intervention:	24-34 consecutive weekly visits after enrolling
Home visitor qualifications:	College degree, 3 years' experience in child development preferred
Supervisory characteristics:	College degree, home visitor experience
Number of home visitors:	6
Clients served:	250 children in 1988
Fiscal year 1989 funding:	$441,134
Evaluation results:	Improvement in mental and physical development, health, parent-child interaction, and home environment

Background

The Center for Development, Education, and Nutrition, founded in Austin, Texas, in 1979, is a private, nonprofit research and development

center that provides educational and human services to children with developmental deficiencies and to their parents. CEDEN's primary goals are to (1) prevent or reverse developmental delay in children, thereby promoting and strengthening their intellectual, physical, social, and emotional development; (2) help their parents to plan for, achieve, and maintain self-sufficiency; (3) improve or maintain an acceptable home environment; (4) improve or maintain the health care and nutritional status of program children; and (5) improve parent-child interaction.

CEDEN's founder and executive director conducted a needs assessment of low-income families in East Austin, home to many of the city's poorest Hispanic families. From this, she ascertained that their highest priority of stated needs was for services to improve child and family development. CEDEN originally served primarily low-income Hispanic children and women who lived in the Hispanic areas of Austin. Over the years, it expanded its target population to include all ethnic and cultural backgrounds and all of Travis County, Texas, which includes the city of Austin.

CEDEN targets infants and young children up to 60 months of age who are either developmentally delayed or at high risk for being so, due to biological or environmental circumstances. Infants and young children up to 24 months of age receive priority because research indicates that children who are developmentally delayed should be reached by age 3.

CEDEN is governed by a 20-member board of directors. The executive director is responsible for overall management and administration. A program coordinator oversees service delivery and supervises the six home visitors, referred to as home parent educators.

Program Services and Activities

Services are delivered through three programs: (1) the Parent-Child Program, which focuses on improving infant and child development; (2) the Pro-Family Program, which concentrates on teaching parenting skills and developing support groups; and (3) the Family Advocacy Program, which helps needy families to become self-sufficient. Most services are delivered through the Parent-Child Program, while the other two programs complement it by ensuring that the family's basic needs, such as food, shelter, and clothing, are met.

Home visiting, along with monthly group meetings, is the primary service delivery method for Parent-Child Program services. The home parent educators must have college degrees, preferably have 3 years'

experience in child development, and are expected to establish a rapport with their clients. They receive 2 weeks of preservice classroom training and 1 month of on-the-job training. Some of the topics covered include case assessment, planning, and reporting. They also receive in-service training about every 2 weeks. The training, which lasts from 30 minutes to 4 hours, covers various subjects, such as stress management, health education, child abuse, and alcoholism. Their supervisor, the program coordinator, has an educational background in language, child development, and psychology.

After enrolling in the program, each family receives 24 to 34 consecutive weekly home visits. Before beginning these visits, the CEDEN staff and the family prepare an individual development plan for the child and for the family.

CEDEN has an Infant Stimulation Curriculum, which describes various activities for each area of child development. Other services include providing health and nutrition information and nutritional and diet analyses, improving the home environment, and making health and related social service referrals. The home parent educators use the curriculum, the results of preentry and mid-program tests, and the individual and family development plans to plan each visit. They use a structured approach to ensure that the program's goal and objectives are achieved. However, the program is flexible because the family's needs will determine which services are provided and which infant stimulation and child development activities will be used.

During the home visit, the home parent educator asks children to perform certain activities, depending on their developmental needs. She also encourages the parents to interact in a prescribed manner with their children in order to maintain the progress made through participation in the program. In addition, she may refer the family for medical and social services, an important program component.

Program Results

CEDEN collects and compares specific information for all program clients as well as a nonequivalent control group. The outcome measures relate to mental and physical development, health, parent-child interaction and home stimulation, and the home environment. Based on program evaluations, the program has helped clients in all the measured areas. For example, at program entry, 45 percent of the infants have cognitive and motor development delays. During each program year, this has been reduced to 15 percent or less. At entry, 20 percent of the houses are

unclean, 21 percent are unsafe, and 26 percent are dark and depressing. At exit, 69 percent of the families improved their home environment in one or more of these areas.

Program Funding, Costs, and Benefits

During 1989, CEDEN received about $441,000 from several sources, including about $255,000 from federal, state, and local governments; $58,000 from nongovernmental grants; and $101,000 from foundations. The cost of an average CEDEN home intervention in 1984-85, the most current year for which information was available, was about $1,095 per client.

Program officials have not conducted a cost-effectiveness evaluation for their primary goal of preventing or reversing developmental delay. However, program officials believe that in the long run, the need for and therefore the cost of special education for children will be reduced through the prevention and reversal of developmental delay.

Program Outlook

CEDEN operated with about $85,000 less in 1989 than in 1988. However, due to CEDEN's diverse funding base, this loss did not have a major impact on services. The executive director is applying for several more grants and, based on past experience, is confident that the program will receive additional funding.

In 1988, CEDEN served about 250 children of an estimated 3,900 to 4,900 target population. The executive director would like to hire additional home parent educators to serve more families.

Resource Mothers for Pregnant Teens

Table I.2: Program Profile: Resource Mothers for Pregnant Teens

Geographical areas served:	16 rural counties in South Carolina
Goals/objectives:	Reduce infant mortality and low birthweight
Administrative agency:	State and local health departments
Service delivery method:	Home visiting
Target population:	Pregnant teens and teen mothers
Number and timing of intervention:	Monthly 1-hour prenatal visits; 1-hour bimonthly postnatal visit up to age one
Home visitor qualifications:	High school diploma; ability to establish a rapport
Supervisory characteristics:	Master's degree in social work
Number of home visitors:	16
Clients served:	Over 1,300 from July 1986 through February 1988
Fiscal year 1989 funding:	$521,351
Evaluation results:	Reduced the number of low birthweight babies; increased the receipt of prenatal care

Background

The South Carolina Resource Mothers for Pregnant Teens program was developed in 1980 to deal with the state's high infant mortality rate, among the nation's highest for the past several years. The program's goal is to reduce the mortality and morbidity of infants born to adolescents and to improve the health and parenting activities of those adolescents. The program initially targeted teenagers 17 years of age and under, pregnant with their first baby. The program now serves 18-year-olds and teens who have had more than one child. The teens must live in 1 of 16 rural counties that program officials have identified as having pregnancy rates and poor birth outcomes for teenagers that exceed the state's rates. The program targeted teenagers because they have a higher percentage of low birthweight infants.

The Resource Mothers program was developed under the direction of the Bureau of Maternal and Child Health within the South Carolina Department of Health and Environmental Control and a licensed clinical psychologist. They decided that the program would address the social, educational, and health needs of the teens, and that services would be delivered through home visits and referrals to other agencies. The home visitors, referred to as Resource Mothers, would be women from the

same community in which the teens lived, primarily because they believed teens would open up to them more readily than to a social worker or nurse.

Originally, the program was a research project jointly managed by the Medical University of South Carolina, McLeod Regional Medical Center, Pee Dee Health Education Center, and the Pee Dee 1 Health District. The Bureau of Maternal and Child Health began administering the program in 1985.

The state coordinator for the Resource Mothers program has primary responsibility for administering it. The district coordinators, one in each of the four health districts in which the program operates, administer the program at the local level. They supervise the 16 resource mothers and report to the state coordinator. The district coordinators and resource mothers are employees of the local health department operated by the Department of Health and Environmental Control.

Program Services and Activities

The Resource Mothers program has many objectives that address the program's goals of decreasing infant mortality and improving health and parenting activities of adolescents. These objectives cover many medical, social, and educational outcomes that can affect low birthweight, the baby's health, and the teen's future. They include, among others, early entry into prenatal care, gaining the recommended amount of weight during pregnancy, age-appropriate infant clinical visits and immunizations, developing parenting skills, family planning, and entry into job training. The primary service delivery strategy is home visits made by resource mothers.

The resource mothers fulfill five roles: teacher, facilitator, role model, reinforcer, and friend. They are women from the local community who have high school degrees and an ability to establish rapport with teens. The first resource mothers received 6 weeks of preservice training; those hired when the program expanded received 3 weeks. The training covered several subjects, including stages in a pregnancy, proper nutrition, labor and delivery, parenting skills, home-visiting techniques, and the local service provider network, as well as going on some home visits. New resource mothers are trained by the district coordinators, who have master's degrees in social work. All resource mothers receive in-service training at the state and local level covering various topics, such as domestic violence and stress management.

The home visits are highly structured, with specific goals and learning objectives for each visit, depending on the month of pregnancy or the infant's age. The resource mothers, however, have flexibility to deal with each teen's particular needs during each visit. Services are offered beginning in the first trimester of pregnancy, although not all teens enter the program at that point. The resource mothers visit each teen at least monthly during pregnancy, daily in the hospital after delivery, and every 2 months during the baby's first year of life.

During pregnancy, the resource mothers emphasize the need for early and regular prenatal care and for preventing or reducing certain risk factors, including smoking, alcohol or drug use, and poor nutrition. After delivery, they emphasize appropriate infant feeding, immunizations, and well-child visits, and teach and reinforce positive parenting skills. The resource mothers also refer the teens to other service providers to ensure that their medical and social needs, such as adequate food and housing, are met, and they reinforce what the teens are told by their health care providers.

Program Results

Based on an evaluation by Dr. Henry C. Heins and others, the program has positively affected the incidence of low birthweight among teens and increased the number of teens receiving adequate prenatal care. Completed in 1986, the study compared teens who received visits from resource mothers to teens who did not, and showed that 10.6 percent of the visited teens had low birthweight babies compared to 16.3 percent of nonvisited teens, and 82 percent of visited teens received adequate prenatal care compared to 64 percent of nonvisited teens. The program was being evaluated again during our visit, but results were not available.

A second evaluation, conducted by the South Carolina Bureau of Maternal and Child Health, showed that the program met its objectives of 50 percent of the teens enrolling in school or job training and 80 percent not becoming pregnant for 1 year after giving birth. The program did not meet its objectives of 85 percent of the teens gaining the recommended weight during pregnancy, 90 percent enrolling in family planning clinics, 16 percent breast-feeding their babies, and 90 percent of the infants receiving age-appropriate clinical visits and immunizations. Because of data collection difficulties, program officials were unable to determine if the program met its objectives related to parenting skills, reducing health risks, and increasing knowledge about health behaviors.

Program Funding, Costs, and Benefits

The program was originally funded by a Robert Wood Johnson Foundation grant awarded to the Medical University of South Carolina. When the state began administering the program in 1985, the program was funded by a 3-year federal Special Projects of Regional and National Significance grant, and in fiscal year 1987, the state added some state funds to the program. During fiscal year 1989, the program received $167,998 in state funds and $353,353 in federal MCH block grant funds.

During the same year, the estimated cost for one resource mother was $15,715, which included salary, fringe benefits, and transportation. In 1987, the cost of supporting one low birthweight infant in a neonatal intensive care unit was $13,616. Since program evaluations show that teens visited by Resource Mothers have fewer low birthweight babies, program benefits exceeded program costs.

Program Outlook

The Resource Mothers program is currently funded with state and MCH block grant funds. State officials are exploring the use of Medicaid funds as well. Program officials are confident the state legislature will continue to support this program because there is strong evidence that it makes a difference. The program will continue to operate in the same 16 rural counties, and program officials think that the program will eventually operate statewide.

Roseland/Altgeld Adolescent Parent Project

Table I.3: Program Profile: Roseland/Altgeld Adolescent Parent Project (RAPP)

Geographical areas served:	Roseland and Altgeld communities, Chicago
Goals/objectives:	Decrease negative outcomes associated with teen pregnancy; decrease potential infant mortality and morbidity, and increase healthy family functioning
Administrative agency:	Catholic Charities' Arts of Living Institute
Service delivery method:	Home visiting and group support meetings
Target population:	Teen and pregnant mothers age 11-20
Number and timing of intervention:	One prenatal visit; weekly until baby is 3 months old
Home visitor qualifications:	Bachelor's degree preferred but not required
Supervisory characteristics:	Master's degree preferred but not required
Number of home visitors:	5
Clients served:	160-175 per year
Fiscal year 1988 funding:	$327,271
Evaluation results:	No formal evaluation

Background

The Roseland/Altgeld Adolescent Parent Project in Chicago serves pregnant and parenting teenagers and their babies. RAPP's goal is to decrease the negative social, health, and economic consequences of adolescent pregnancies by providing or assisting clients to obtain comprehensive community based-services. To accomplish this goal, the program has several objectives, which include: (1) decreasing potential infant mortality and morbidity, child abuse and neglect, and other negative consequences associated with adolescent pregnancies; (2) increasing healthy family functioning and well-baby care; (3) providing access to the community's resources by networking and participating in community organizations and coalitions; and (4) decreasing the number of adolescent and repeat pregnancies among elementary school girls.

RAPP began in 1980 as a component of the Catholic Charities' Arts of Living Institute, a private, nonprofit social service agency. The institute was established in 1973 to address the many needs of pregnant adolescents. Its goal is to decrease infant mortality, child abuse and neglect, and teen pregnancies by sponsoring projects such as RAPP.

Catholic Charities formed RAPP to serve pregnant and parenting females, age 11-20, in the Roseland and Altgeld Gardens communities. Roseland is a neighborhood of older single-family dwellings with high unemployment. Altgeld Gardens, a Chicago Housing Authority project composed of row houses, is one of the poorest areas in the city. The program targets teens who live in these areas because of the high teenage pregnancy rates and poor economic conditions. Over 25 percent of Roseland's teenage girls became mothers, and one-third of the births in Altgeld are to teen mothers.

Program Services and Activities

The home visitors provide a variety of services either in the home or in group meetings. These include (1) teaching well-baby care, (2) administering the Denver Developmental Screening Test to identify developmental problems infants may have, (3) providing counseling, (4) observing parent/child relationships, and (5) making referrals to other agencies. Referrals are a major component of RAPP because the program cannot provide all the assistance the participants need.

The staff includes a project director, a supervisor, five home visitors, and a secretary. The director has a master's degree and the supervisor a bachelor's degree in social work. Three of the five home visitors have bachelor's degrees in social work; however, a degree is not required. Most of the home visitors come from the communities being served.

Home visitors' preservice training consists of a 1-week orientation about the program's goals, objectives, and procedures. An experienced home visitor then accompanies them on home visits for about 1 month. They receive regular in-service training covering such topics as case management, working with volunteers, and documenting client information.

The home visitors use a risk assessment to select the services to provide each client. They followed general guidelines when delivering services in the home. Program officials believe that rigid guidelines would be inappropriate because unexpected problems may arise, and the home visitors need flexibility to address these problems.

The frequency of home visits varies depending on clients' needs. The home visitors usually visit their clients once in the home during pregnancy and weekly for up to 3 months after the baby is born. In addition, the visitors encourage teens to attend weekly support group meetings. The group follows a curriculum, developed by the Minnesota Early Learning Design, to increase self-esteem among the participants. Each

meeting has a separate theme and involves discussions in which the teens are encouraged to share their experiences and feelings.

Program Results

RAPP does not have a formal evaluation system. Instead, program officials monitor progress toward achieving objectives by documenting and summarizing their contacts with and services provided to clients. They send this information to Catholic Charities' and the Ounce of Prevention Fund, which use it to evaluate progress toward their overall goals.

Program Funding, Costs, and Benefits

From 1986 to 1989, RAPP received funding from the state of Illinois, Catholic Charities, and The Ounce of Prevention Fund, a public/private partnership that funds and provides training for programs that work with adolescent mothers to foster child development. During 1986-88, total funding increased from $194,600 to $327,300. The state's funding remained stable at $55,000 each year. The Ounce of Preventions Fund's funding also remained fairly constant at just over $100,000 each year. Catholic Charities funded the remaining costs, which increased from $39,000 to $168,200. Officials had not done a cost/benefit analysis and did not have any figures on cost savings or future cost avoidance.

Program Outlook

The program serves 160 to 175 clients per year. The director would like to expand the program to serve more of the target population and to hire aides to take care of the babies during group meetings.

Southern Seven Health Department Program: Parents Too Soon and the Ounce of Prevention Components

Table I.4: Program Profile: Southern Seven Health Department Program (Parents Too Soon and the Ounce of Prevention Components)

Geographical areas served:	Seven rural counties in southern Illinois
Goals/objectives:	Reduce negative effects associated with teen pregnancy, such as low birthweight of infants and the incidence of teen pregnancies
Administrative agency:	Southern Seven Health Department
Service delivery method:	Home visiting, workshops
Target population:	Pregnant and parenting teens, ages 10-20
Number and timing of intervention:	Parents Too Soon component—monthly prenatal visits, and at 6 weeks and 6 months after birth; Ounce of Prevention component—monthly postnatal visits until baby is 12 months old, and at 15 and 18 months of age
Home visitor qualifications:	Bachelor's degree
Supervisory characteristics:	Experienced home visitor
Number of home visitors:	PTS—four; Ounce—three
Clients served:	65 percent of pregnant teens in target area
Fiscal year 1988 funding:	PTS—$224,695; Ounce—$90,640
Evaluation results:	Fewer low birthweight infants born to program participants than nonparticipants

Background

The Southern Seven Health Department Program, which provides services in seven southern Illinois counties, focuses on (1) reducing the negative effects associated with teenage pregnancy, (2) securing needed services for clients, and (3) reducing the incidence of teenage pregnancy.

The program targets girls and young women, age 10 to 20, who are at high risk for negative consequences of pregnancy and parenting. They must reside in the seven counties, which encompass a rural area of about 2,000 square miles.

The program is operated by the Southern Seven Health Department's Social Services Division. The division director, who reports to the Health Department administrator, administers the program and supervises the home visitors.

The program, which began in early 1984, has two components with separate staff. The Parents Too Soon (PTS) component is a state program that attempts to deter teenage pregnancy and lessen the negative consequences of adolescent pregnancy and childbearing. It focuses primarily on pregnant teens during their prenatal stage. Another component is supported by The Ounce of Prevention Fund, a public-private entity concerned with healthy child development. The staff of this component provide services to teens after their child's birth. These components are offered jointly to maximize the positive pregnancy and parenting outcomes for teens enrolled in the program.

Program Services and Activities

To accomplish the program's objectives, the home visitors provide a variety of services. These include (1) teaching prenatal and well-baby care, (2) ensuring that the client has a medical provider and transportation to get there, (3) providing information on family planning, (4) counseling clients about infant development and behavior and budgeting and housekeeping, and (5) referring clients to other agencies. The referrals are an important program component because referral agencies can help the teens with their medical, social, and educational needs. In addition to home visits, the staff provide sex education and prenatal workshops.

A multidisciplinary professional staff provides the program services. The staff includes four social workers, two nurses, and one nutritionist who make home visits, and one lay person whose primary responsibility is to help teens to remain in school.

New home visitors receive 1 to 2 weeks of orientation about the program. The PTS staff are not required to attend in-service training; however, they may attend optional workshops on such topics as preterm labor, nutrition, and stress management. The Ounce of Prevention staff attend an annual conference and four workshops each year on such topics as nutrition and parenting skills.

When a client enrolls in the program, the home visitor does a risk assessment to determine the client's needs and develops a service delivery strategy to ensure that those needs are met. When the client is near

delivery, she is transferred to the Ounce program and another assessment is done. To allow for flexibility, the home visitors did not follow a structured protocol during the home visits. However, as of January 1990, the Ounce required its home visitors to follow a structured curriculum that allowed flexibility.

The frequency of home visits varies by program component and the client's needs. However, a general rule is that the PTS staff see their clients once a month throughout pregnancy and again when the baby is 6 weeks and 6 months of age. The Ounce home visitors see their clients about once a month from the time the baby is born until the baby is 12 months old and again at 15 and 18 months.

Program Results

The Southern Seven program does not have a formal evaluation component. However, program statistics for 1984-87 show that in 3 of the 4 years, program participants had fewer low birthweight infants than nonparticipants. In 1987, 2 percent of the participants had low birthweight infants, compared to 12.5 percent of the nonparticipants.

Program Funding, Costs, and Benefits

The program is funded by the state of Illinois and The Ounce of Prevention Fund. Total funding in fiscal year 1988 was $315,300, with 71 percent coming from the state and 29 percent from the Ounce. Officials had not done a cost-benefit analysis and, therefore, did not have any figures on cost savings or future cost avoidance.

Program Outlook

The project director believes that the quality of the program's services will suffer if it is not able to retain qualified staff to deliver program services. In order to do so, the program needs to offer the home visitors higher salaries. Thus far, neither the state nor The Ounce of Prevention Fund has indicated that it will increase program funding.

Maternal and Child Health Advocate Program

Table I.5: Program Profile: Maternal and Child Health Advocate Program

Geographical areas served:	Detroit
Goals/objectives:	Promote early use of prenatal and child health care to improve pregnancy outcomes and infant health
Administrative agency:	Wayne State University Medical School
Service delivery method:	Home visiting
Target population:	Women enrolled in specific prenatal health clinics or who had a high-risk newborn
Number and timing of intervention:	Up to 21 visits scheduled throughout pregnancy and until the baby reaches 1 year of age
Home visitor qualifications:	High school diploma; receiving public assistance when hired
Supervisory characteristics:	Master's degree in social work or registered nurse
Number of home visitors:	21 originally hired; 9 as program phased out
Clients served:	First year—705; second year—848
Fiscal year 1989 funding:	$553,000
Evaluation results:	Available in 1990

Background

The Maternal and Child Health Advocate Program, in Detroit, was a home-visiting project with the goal of promoting early and appropriate use of prenatal and child health care to improve pregnancy outcomes and infant health. The project targeted pregnant women enrolled in specific prenatal clinics and women with high-risk newborns in the Children's Hospital of Michigan neonatal intensive care unit.

The program, begun as a research project in June 1986 and ended in October 1989, was administered by Wayne State University Medical School's Department of Community Medicine. The department's chairperson, a Department of Pediatrics professor, and a Department of Obstetrics and Gynecology professor codirected the project. The staff included a project coordinator, who managed the program, and three teams, each of which included a supervisor and four home visitors, called advocates. In June 1988, the university's newly created Institute of Maternal and Child Health began administering the program using the same administrative structure.

Program Services and Activities

The advocates provided case management, referral, and counseling services in the home. Specifically, advocates (1) administered assessment questionnaires, (2) counseled mothers regarding pregnancy and related issues, (3) identified various resources for health needs, and (4) provided referrals for other needs, such as transportation, food, and clothing. The advocates also provided emotional support. The advocates spent much of their time making referrals because many of their clients had no knowledge of available services and how to access them.

The advocates followed two types of structured protocols while conducting home visits. The first was a needs assessment administered at five points between the initial prenatal contact and the baby's first birthday. The assessment covered the clients' health, living conditions, and social problems and was used to tailor services to the clients' needs. The second was case management guidelines, which described a suggested minimum number of visits and the appropriate services to be given at various stages. For example, during the third trimester of pregnancy, the visit's focus was on preparing for labor and delivery and on using contraceptives after childbirth. The guidelines recommended that each client receive up to 21 visits scheduled throughout pregnancy and until the baby was 1 year old. The number of visits would depend on when the client entered the program. The advocates could deviate from the protocol to address any current crises facing their clients.

Program staff were hired between June 1986 and March 1987, at which time home visits began. The home visitors had to (1) be receiving public assistance, (2) have a high school diploma, (3) work well with others, (4) be Detroit residents, and (5) be familiar with the city's social service system. The program also tried to hire persons who were caring and culturally sensitive and had good interpersonal skills. Two of their supervisors had master's degrees in social work, and one was a registered nurse.

The home visitors received 6 weeks of preservice training. Topics included human growth and development, human enhancement skills, community resources and how to use them, and the role of a paraprofessional. They attended monthly in-service training covering such topics as parenting resources and skills and AIDS and pregnancy.

Program Results

Program effectiveness was determined by comparing clients receiving full program services to two other groups. The three groups were (1) a home visitor group who received regular home visits until their infants' first birthday, (2) a research control group who received occasional

visits, and (3) a comparison group who received no visits. Evaluation results were to be available in 1990.

Program Funding, Costs, and Benefits

The program received funding from the Michigan Department of Health, the Ford Foundation, and VISTA during its 40-month existence. During this period, the state provided $877,000 used primarily for services, and the Ford Foundation provided $509,000 used primarily for evaluation during the first 2 years. VISTA provided funds that were used to pay subsistence allowances instead of salaries to the home visitors. Increased state funding during the third year was used to pay the home visitors a salary. Program officials did not have any data on cost savings or future cost avoidance.

Program Outlook

The Maternal and Child Health Program ended in October 1989. At that time, the Institute of Maternal and Child Health began a new prenatal/postnatal home-visiting project. The new program was designed to reach pregnant women who are not getting prenatal medical care by emphasizing community participation. To do this, program officials planned to increase the presence of supportive community personal networks for women with children and establish a local advisory board consisting of health and social service providers, community leaders, and residents. The new project focuses on pregnant women and parents of young children from four communities in Detroit's Eastside. The project is funded by HHS and the Michigan Department of Public Health.

Changing the Configuration of Early Prenatal Care

Table I.6: Program Profile: Changing the Configuration of Early Prenatal Care (EPIC)

Geographical area served:	Providence
Goals/objectives:	Improve pregnancy outcomes, health care and coping skills; reduce low birthweight
Administrative agency:	Rhode Island Department of Health
Service delivery method:	Home visiting
Target population:	Inner-city, low-income, high-risk women
Number and timing of intervention:	8-10 weekly visits during 20-30-week gestation period
Home visitor qualifications:	Bachelor's degree in nursing; home-visiting experience
Supervisory characteristics:	Master's degree in nursing; home-visiting experience
Number of home visitors:	2
Clients served:	280
Total program funding:	$459,545
Evaluation results:	Not completed

Background

The Changing the Configuration of Early Prenatal Care project in Providence was a preventive public health program. The project addressed risk factors amenable to change among women at high risk for having low birthweight infants. EPIC's goal was to improve the pregnancy outcomes for high-risk, inner-city women through mid-pregnancy prenatal care home intervention. To accomplish this goal, the project sought to (1) increase the average number of prenatal doctor visits from 8 to 10; (2) improve the nutritional status, lifestyle behavior, and health care utilization of clients served; and (3) reduce the incidence rate of low birthweight by 30 percent among the target population.

Services were provided to inner-city, low-income, high-risk pregnant women who registered for prenatal care during March 1987 and June 1989 at two inner-city Providence Maternal and Child Health clinics. They also had to (1) be less than 20 weeks pregnant, (2) live in a census tract with a higher than average percentage of low birthweight babies, and (3) agree to participate in the project.

EPIC, begun as a research and development project in October 1986, was administered by the Rhode Island Department of Health's Division of Family Health. The division's special projects and evaluation section chief was the EPIC project director with responsibility for administering and evaluating the program. The Department of Health contracted with the Visiting Nurses Association, Inc. (VNA), for two nurses and a supervisor to provide EPIC services.

Program Services and Activities

EPIC provided services in five broad areas: (1) medical prenatal services, (2) other medical and social community services, (3) substance abuse, (4) nutrition, and (5) coping with stress. Services were provided through 8 to 10 weekly home visits between the 20th and 30th weeks of pregnancy and referrals to other providers. Based on observations, questions, and the woman's medical background, the nurses determined her knowledge, resources, and support as they related to each of the five service areas. The nurses then placed each woman into one of three modules for each service area, depending on the intensity of need. They also used interpreters to assist in providing services to their non-English-speaking clients, including Hispanic and Southeast Asian women.

The nurses followed a protocol during the home visits; however, they could deviate from it if the clients had other concerns that needed to be addressed. During the home visits, the nurses provided information that specifically related to the women's needs. Examples included the effects of substance abuse on fetal development, how to apply for food stamps, and the importance of eating well-balanced meals. The nurses also referred the program participants to other agencies that could provide services that the EPIC program did not provide, such as drug counseling and Medicaid. No services were provided after the child was born.

The EPIC nurses had bachelor's degrees in nursing, had several years of home-visiting experience, and were selected because they were compassionate, honest, and able to easily establish a rapport with others. The supervisor had a master's degree in nursing and extensive home-visiting experience. Since the nurses had prior home visiting experience and were knowledgeable about the local service provider network, the program did not include formal preservice or in-service training.

EPIC provided services from March 1987 through June 1989. Of the 1,160 women to whom the program was offered, 559 agreed to

participate. Half of these women received home visits, while the other half served as a control group for evaluation purposes.

Program Results

Program officials used a randomized controlled trial research design to evaluate the program. At the time of our visit in June 1989, formal evaluation was just beginning. Consequently, conclusions had not been drawn regarding whether the program had achieved its three major goals. However, the preliminary evaluation results indicated that the project had positively affected the pregnancy or lives of the women who received home visits. For example, preliminary posttest evaluation results showed a 55-percent increase in the number of women enrolled in WIC for program participants in comparison to a 38-percent increase for the control group. The program director planned to complete the evaluation by spring 1990.

Program Funding, Costs, and Benefits

EPIC was funded entirely by a 3-year $459,545 federal SPRANS grant. Based on VNA estimates, the average intervention cost $23.30 per hour. This included salaries, benefits, and transportation expenses for the nurses, escorts, and interpreters, but not overhead or supervisory expenses incurred by VNA or evaluation expenses incurred by the state. The total VNA cost per visit including overhead depended on the number of visits made each day. While the program operated, about three visits were made each day; VNA estimated that the average cost was $87 per visit.

Program officials did not have any figures on cost savings or future cost avoidance. This information was to be developed as part of the program evaluation.

Program Outlook

The program ceased to function in June 1989. The project director speculated that if evaluation results were positive, the program might be funded with state funds or federal MCH block grant funds. In the interim, no attempts were being made to continue EPIC services. Evaluation results were also to be used to refine the program's objectives and services, if necessary. If the program were continued, it would be administered by the Department of Health's Preventive Services Section, which would integrate EPIC services with other state-funded services. The department would continue to contract with VNA for delivery of program services.

Great Britain's Health Visitor Program

Table I.7: Program Profile: Great Britain's Health Visitor Program

Geographical areas served:	Great Britain (England, Scotland, Wales, and Northern Ireland)
Goals/objectives:	Promote sound mental, physical, and social health of children by educating families
Administrative agency:	District health authorities
Service delivery method:	Home visiting
Target population:	Children from birth through age 5
Number and timing of intervention:	One prenatal visit plus five visits from birth through age 5
Home visitor qualifications:	Registered nurses with special graduate-level education
Supervisory characteristics:	Previous health-visiting experience
Number of home visitors:	One health visitor per 3,000 people
Clients served:	All children in Great Britain
Fiscal Year 1989 funding:	Not available
Evaluation results:	No evaluation done

Background

Home health visiting in Great Britain began in 1852, when members of the Manchester and Saltford Ladies Sanitary Reform organization began to visit poor families in their homes to improve their health knowledge and practices. By 1905, 50 areas employed health visitors. The 1907 Notification of Births Act established a procedure to notify responsible authorities, including health visitors, when a baby was born; this became mandatory in 1915.

The goal of health visiting in Great Britain is to promote health and to prevent mental, physical, and social ill health in the community. The primary focus is on maternal and child health care, and the expected outcome is reduced infant mortality and morbidity rates.

All British residents are eligible for health-visiting services; however, the health visitors target children from birth through age 5. The program further targets children who are at risk due to inadequate housing and improper nutrition.

In Great Britain, the Health Ministers in England, Wales, Scotland, and Northern Ireland have responsibility for health services. In England,

there are 14 regional health authorities and 191 district health authorities. The district authorities employ health visitors who, together with general practitioners and midwives, make up a primary health care team. The general practitioner and the midwife provide prenatal care at community health clinics, while the health visitor provides postnatal services in the home.

Program Services and Activities

During a health visit, the focus is on health promotion and education, immunization, and screening and surveillance of infants. Education is the primary method health visitors use to help families make sound, informed decisions. Specifically, the health visitors emphasize such things as breast-feeding, infant immunizations, accident prevention, and appropriate health care. The health visitors also monitor the child's development so that potential problems, such as poor hearing, can be identified and addressed as soon as possible. They also make necessary referrals for medical care or social services.

The health visitors follow general guidelines when delivering services. Typically, six home visits are made per pregnancy: one prenatal visit when the health visitor describes her role and available services to the family and five postnatal visits before the child enters school. During each visit, the health visitors have flexibility to address any unanticipated problems. Each child also receives hearing and mobility screening tests in a clinic at about 7 to 9 months of age and another clinic screening of vision, hearing, social skills, and physical and emotional development at 2-1/2 to 3 years of age.

In most cases, the health visitor independently provides the advice, guidance, and education that families need. However, she has a close working relationship with other community support agencies that handle psychological, social, and legal problems that she is not qualified to handle.

All health visitors are registered general nurses and have completed a postgraduate health visitors course that requires 51 weeks of academic and practical training. The curriculum includes such topics as human growth and development and social policy and administration. After completing the course, health visitors are given a small caseload under supervision. After certification, the health visitor receives in-service training from her employing health authority. The training generally consists of refresher courses and seminars.

Senior nursing officers, who are experienced health visitors, supervise the health visitors. They usually supervise about 25 visitors, but this varies by district. However, the health visitors receive little direct oversight from supervisors.

Program Results

Program officials have not formally evaluated the effectiveness of health visiting. However, public health officials believe the effects of health visiting are positive.

Program Funding, Costs, and Benefits

In Great Britain, total health service expenditures increased by 229 percent from $14 billion in 1978 to $46 billion in 1989, not considering inflation or currency fluctuations.[1] Health officials could not tell us the amount of health service expenditures spent on health visiting and did not know how much health visiting cost. They also had not done a cost-benefit analysis and did not have any figures on cost savings or future cost avoidance.

Program Outlook

Because of rising costs and increasing demands for health services, the British Government is beginning to demand more accountability. The prospect of productivity-oriented reforms in the National Health Service will cause all health professions to begin determining the costs and outcomes of their services. To this end, program officials are beginning to develop management information systems to monitor the amount and type of health visitor services delivered and to measure their success in meeting the program's objectives.

[1]The annual average exchange rate for the pound sterling for 1988 was $1.780805=1 pound.

Denmark's Infant Health Visitor Program

Table I.8: Program Profile: Denmark's Infant Health Visitor Program

Geographical area served:	273 of 277 municipalities
Goals/objectives:	Reduce infant mortality by promoting the health and well-being of children
Service delivery method:	Home-visiting and parenting classes
Target population:	Children through age 6
Number and timing of intervention:	Tailored to clients' needs
Home visitor qualifications:	Professional nurse who completed an advanced program in public health nursing
Supervisory characteristics:	Public health nurse
Number of home visitors:	On average, 1 per 120 children
Clients served:	90 percent of all infants as of 1976
Fiscal year 1989 funding:	Not available
Evaluation results:	No evaluation done

Background

Home health visiting in Denmark began in 1932 as a pilot program in response to the country's high infant mortality rate. Four nurses went to four geographical areas in Denmark and visited each newborn at least 12 times during the first year of life. In 1937, after 6 years of what the government characterized as positive findings, the Danish Parliament passed a law allowing municipalities in Denmark to employ public health nurses as health visitors. The law did not make the service compulsory, but the government offered to subsidize 50 percent of the health-visiting costs for municipalities that chose to participate. Additional legislation was passed in 1946, 1963, and 1974 to strengthen the original law.

The purpose of home health visiting in Denmark, hereafter referred to as health visiting, is to promote the health and well-being of children. The health-visiting program focuses on the preventive mental, social, and environmental factors that combine to influence the behavior of mothers and their children. The program targets children from birth to age 6.

Health visiting in Denmark is a component of a preventive health care system to which all citizens have free access. As of 1985, 273 of the 277

municipalities in Denmark employed a health visitor. Individuals and families can refuse health-visiting services, but less than 2 percent do so.

Health visitors are employed at the municipal level by the Director of Social and Health Administration and belong to a primary health team that includes general practitioners and midwives. The director oversees the health visitor services. For the most part, the health visitors function independently, planning and scheduling their own work. Most municipalities are small and do not employ a health visitor supervisor.

Program Services and Activities

The health visitors provide many services designed to influence parental behavior and decrease children's health problems. They perform routine health checkups for infants and answer new mothers' questions about feeding, diapering, illnesses, and the baby's development. They also test the child for sight, hearing, and motor development. In addition, nurses help mothers with other needs, including obtaining transportation to a clinic or assisting with domestic problems and stress management. To supplement the health visits, some municipalities offer parenting classes and programs for the mother, such as parent group classes and open houses. During the classes, the parents and health visitors discuss such topics as nutrition, diet, and infant stimulation. Open houses are held once a week at the health visitor's office, where mothers and their babies come to interact with one another.

A basic principle of Denmark's overall health policy is the coordination and cooperation of various health and social services. The health visitor is responsible for establishing continuity in preventive, curative, and outreach services for the families served. The health visitor fosters cooperation with a host of other agencies, because while highly skilled, the health visitor is not equipped to handle all the problems that might be encountered, such as alcoholism and child abuse.

The health visitor has flexibility in conducting the home visits. A standardized program delivery strategy is followed; however, each visit is tailored to address conditions prevailing at that time. The number and frequency of visits is based on the health visitor's assessment of the physical, social, and environmental conditions of the child and family. However, a child and family who are not at risk will receive five visits during the child's first year.

To become a health visitor, a person must (1) be a professional nurse, (2) complete an advanced program in public health nursing, and (3) pass an exam covering the principles and practices of public health nursing and organization and administration. The health visitors do not attend scheduled inservice training; however, each year, they may attend a Danish Nurses Organization-sponsored conference. Topics covered include the latest health prevention strategies, psychology, and communications.

Program Results

Since the pilot program in the 1930s, health visiting has not been evaluated to measure its effectiveness. Public health officials in Denmark believe that health visiting is an important part of preventive health care and that it promotes wellness by developing healthier children, which leads to a lower infant mortality rate.

Program Funding, Cost, and Benefits

In 1985, Denmark spent $4.9 billion,[2] or 5.5 percent of its gross national product, on public health services, including health visiting. Program officials do not collect data on the cost of health visiting services. They have not done a cost-benefit analysis and had no figures on cost savings or future cost avoidance.

Program Outlook

Raising health standards through preventive health is of great importance in Denmark. Because of this, health visiting will continue to be a government priority. However, health visiting may change in the near future. In 1987, the Danish Minister of Health proposed consolidating all health care legislation. This action, which may take effect in January 1991, may make health visiting mandatory. The legislation may also allow the municipalities to hire professionals other than nurses, such as social workers, to provide health-visiting services.

[2]The annual average exchange rate for the Danish kroner for 1988 was $1.00=6.72809 kroner.

What Happens on a Home Visit?

GAO staff accompanied home visitors at every site we visited. The following descriptions illustrate the variety of situations encountered by home visitors.

Aiken County, Rural South Carolina

Purpose of visit: To support and educate a teenager close to delivery.

Provider: Paraprofessional, Resource Mothers Program.

The client was 13 years old, 8-1/2 months pregnant, a victim of child abuse and, currently, a ward of the state. The visit took place in her grandmother's trailer—where the client had often returned when running away from her foster homes. The home visitor had to knock several times and call the client's name before the door would open. The trailer was cluttered and cramped, and the young woman was dressed in a windbreaker with what appeared to be only a slip beneath it. The client was not feeling well and complained of an aching back. When the home visitor asked if the baby was moving actively, the client indicated that she had not felt much movement since her mother had kicked her in the stomach during an argument. Concerned about the health of the unborn baby, the home visitor urged the client to see her doctor. Because the baby was almost due, the home visitor and the girl discussed contingency plans in case the client was alone during labor. The home visitor reminded the girl that she could call 911 if she needed help. The home visitor stressed the importance of good nutrition for the remainder of the girl's pregnancy. The girl promised to call her home visitor as soon as the baby was born.

Austin, Texas

Purpose of visit: To work on fine motor, language, and cognitive skills with developmentally delayed child.

Provider: Professional, CEDEN program.

A small apartment was home for the mother, her four children, and, periodically, her husband. Program services were directed to the youngest of this Hispanic family—a 26-month-old girl with delayed speech development. The home visitor moved through a number of speech, fine motor, and cognitive development exercises, including sounds and pictures of animals, bead stringing, and puzzles of different shapes and sizes. The mother, 32 years old with a seventh grade education, was included in these structured activities. The mother spoke to the child in a mixture of Spanish and English. The home visitor

encouraged the mother to speak more often to the child. Though the child had made progress, she was still quite shy and rarely spoke. She would, however, frequently look at the family's visitors and smile. The home visitor was trying to schedule a speech assessment for the child at the University of Texas.

Anna, a Small Town in Rural Illinois

Purpose of visit: To educate and support a teen mother.

Provider: Professional, Southern Seven Program

The teen mother seemed happy to see the home visitor. Though the family—a 17-year-old-mother, her husband, and their 15-month-old-child—had just moved into a public housing project the week before, their apartment was neat and clean. The mother was home alone with her daughter; her husband was at work. The home visitor covered a number of topics relating both to the child's development and the mother's goals. She checked if the child had been immunized and had reached developmental milestones, such as feeding and undressing herself. The mother and home visitor discussed positive child discipline practices, such as rewarding for good behavior and making the child sit in the corner instead of physically punishing her. The home visitor gave information on child development and enrolling the child in Head Start. They discussed birth control methods. The mother told the home visitor she was planning to return to school and planned to keep her birth control appointment, since she did not want more children. According to the home visitor, her short-term goals were to have the mother pass her high school equivalency exam and increase her parenting skills. The home visitor would like, in the long term, to see this mother become more self-confident and employed.

Altgeld Gardens, a Housing Development in Urban Chicago

Purpose of visit: To discuss the mother's needs, the child's development, and the home situation since the last visit.

Provider: Paraprofessional, RAPP program.

This 19-year-old mother of a 19-month-old daughter had been a client of the program for almost 2 years. The mother had not had an easy life. She had been sexually assaulted by a number of family members and forced to leave her family by her mother—who had also been a teen mother—when she became pregnant. After her child's birth, the client moved from her aunt's home to a boyfriend's, then to a grandfather's in

another state, to a girlfriend's, and, finally, back to her mother's. According to the client, her life had begun to improve, due in part to RAPP. She had started a full-time job, found a baby sitter close to home, and planned to enter college in the fall. Though her current living situation still produced problems, finding employment had helped. The home visitor informed the mother about sources of financial support for college. In addition, the home visitor gave the mother suggestions for developmental activities for the child. The home visitor would see this client again that week at the program's group meeting.

Holbaek, a Small Town in Denmark

Purpose of visit: To check on the status of breast-feeding, weigh the child, and respond to the mother's questions.

Provider: Professional nurse.

This was the home visitor's third visit to a young family with their first baby. The mother was 25 years old and not married to the father, a 26-year-old mason. Their baby was a few weeks old. Their home was spacious and well furnished. The home visitor's goal for this visit was to chart the child's growth and development and answer any questions of the mother. After weighing the baby and recording her progress, the home visitor discussed immunization with the mother, suggesting that the baby get her first vaccination soon. The baby had a skin rash, which the home visitor diagnosed as merely dry skin. She advised the mother on preventing such rashes in the future and encouraged both parents to attend evening parents' group meetings. The mother asked about her baby's crying patterns. The home visitor reassured her that everything appeared to be normal. After the visit ended, the home visitor told us that would be her last visit for a while, since the family was considered a "no-problem" household. Contact with this family would be maintained through the parents' group.

Mid Glamorgan Health District, Rural Wales

Purpose of visit: To physically check children and assess living conditions of higher risk families.

Provider: Professional nurse.

The two families visited were living in trailers in a gypsy caravan park. These nomadic families travel throughout Great Britain, parking on vacant or public lands. This caravan park was very dirty and lacked

Comments From the Department of Education

UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF SPECIAL EDUCATION AND
REHABILITATIVE SERVICES

MAY 21 [illegible]

THE ASSISTANT SECRETARY

Ms. Linda G. Morra
Director, Intergovernmental
and Management Issues
United States General Accounting Office
Washington, D.C. 20548

Dear Ms. Morra:

Thank you for the opportunity to comment on the draft report to the Congress on the use of home visiting as an early intervention strategy for at-risk families. Home visiting is supported by the Department as a useful mechanism for providing services to infants, toddlers and young children with disabilities. We believe, however, that States and local providers should decide which mechanisms and settings are appropriate to meet the individual needs of these children. In general, the Department believes that the report is well written and well organized, and is generally responsive to the questions that guided the study. Some of the conclusions that are drawn (home visitation programs can be effective intervention strategies for at-risk families; home visitation programs can be cost effective) are reasonably supported by the studies cited in the report. However, other conclusions (and corresponding recommendations) are not well supported in the report.

The following is a reiteration of the recommendations made to the Secretary in the draft report, and the Department's response to each recommendation:

RECOMMENDATION TO THE SECRETARY OF EDUCATION

- Require Federally supported programs that use home visiting to incorporate certain critical program design components for developing and managing home visiting services, including:

  (a) clear objectives, which are used to manage program progress and to evaluate program outcomes;

  (b) structured services by trained and supervised home visitors whose skills match the services they deliver;

  (c) close linkages to other service organizations to facilitate case management; and

  (d) commitments for further funding beyond any Federal demonstration period to sustain benefits beyond short-term initiatives.

400 MARYLAND AVE. S.W. WASHINGTON, D.C. 20202-2525

Department of Education Response

Although many of the design components recommended for inclusion in home visiting programs may be related to program success, there is insufficient evidence presented in the report or otherwise available that demonstrates that those particular components are key to success or, if absent, lead to failure. As noted in the report, most of the information about these key design components were derived from evaluators' statements or suppositions about reasons for not accomplishing objectives, rather than from systematic research designed to identify which variables are causally related to specific outcomes. We believe that consideration of the design components named in the report represent working hypotheses that should now be verified through research rather than requiring that they be included in every program funded.

It is also important to note that most of the recommended design components are already included in the selection criteria for projects funded under the Handicapped Children's Early Education Program (clear objectives and expected outcomes; a well-defined target population; services specifically designed for target population; personnel skills suited to achieve program objectives; systematic evaluation; and (under our Outreach program) assurance of continued services as a condition of receipt of funds.

RECOMMENDATION THE SECRETARY OF EDUCATION

- Make existing materials on home visiting more widely available through established clearinghouses, conferences and communications with States and grantees.

Department of Education Response

We agree that existing materials on home visiting, as well as materials related to other strategies and settings for services, should be made more widely available through existing mechanisms.

RECOMMENDATION TO THE SECRETARY OF EDUCATION

- Provide technical or other assistance to more systematically evaluate the costs, benefits, and potential cost savings associated with home-visiting services.

Department of Education Response

The Department agrees with this recommendation, although we believe that technical assistance is premature until the evaluation phase has been completed. The Department is supporting several research and other projects to evaluate home-visiting services such as a project at Utah State University that is conducting several studies to determine the costs and effects of different kinds and intensities of home-visiting programs for children with various disabilities.

Page 3 - Ms. Linda G. Morra

RECOMMENDATION TO THE SECRETARY OF EDUCATION

- Give priority to Federal demonstration projects designed to (1) meet the multiple needs of target populations, (2) incorporate home visiting permanently into local maternal and child health and welfare service systems, and (3) replicate models that have demonstrated their efficacy.

Department of Education Response

We agree with (1) and (3) of this recommendation; however, home-visiting programs should not be given priority over other approaches or settings for services since there is insufficient evidence of their superiority over other approaches.

RECOMMENDATION TO THE SECRETARY OF EDUCATION

- Charge the Federal Interagency Coordinating Council with the

  Federal leadership role in coordinating and assisting home-visiting initiatives.

Department of Education Response

We agree with this recommendation. However, since there is insufficient evidence that home-visiting programs are superior to other approaches or settings for services, we do not think the FICC should promote home-visiting programs as superior approaches or promote them to the exclusion of other programs.

Thank you for the opportunity to comment on this report. I and members of my staff are prepared to respond, if you or your representatives have any questions. I have provided technical comments related to the draft report that are indicated on the appropriate pages included as Enclosure A.

Sincerely,

Robert R. Davila

Enclosure

Comments From the Department of Health and Human Services

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

Washington, D.C. 20201

JUN 8 1990

Ms. Linda G. Morra
Director, Intergovernmental
and Management Issues
United States General
Accounting Office
Washington, D.C. 20548

Dear Ms. Morra:

Enclosed are the Department's comments on your draft report, "Home Visiting: A Promising Early Intervention Strategy For At-Risk Families." The comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

The Department appreciates the opportunity to comment on this draft report before its publication.

Sincerely yours,

Richard P. Kusserow
Inspector General

Enclosure

COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES ON THE GENERAL ACCOUNTING OFFICE (GAO) DRAFT REPORT, "HOME VISITING: A PROMISING EARLY INTERVENTION STRATEGY FOR AT-RISK FAMILIES"

General Comments

This report is an extensive compilation and discussion of experience and observations regarding home visiting in the United States. It is informative and covers a broad range of topics related to the types of programs available and presents detailed information about a small set of these programs in the United States. It provides a significant concept of home visiting.

While this report shows that home visiting can be an effective intervention for at-risk families in certain circumstances, several contextual features of home visiting that could affect its success in the United States are not dealt with by GAO to a sufficient extent. Although the experiences of Denmark and the United Kingdom are cited, the report does not make clear that these programs operate in a very different context, that of universal cost-free access to health care and a lengthy tradition of social welfare that is much less class-based than welfare in the United States. Also, the population of Denmark, and until recently, the United Kingdom, has been much less ethnically diverse than the United States' population. Their infant outcomes are much better (as measured by low birthweight and infant mortality).

The report does not discuss existing programs in the United States which use home visiting and have the ongoing funding and institutional base that the report states are necessary criteria for success. One example would be public health nursing. Public health nursing has had many of the functions that the GAO ascribes to home visiting programs but has had to struggle to maintain its funding base. Guaranteeing firm funding to public health nursing and supporting expansion of those services might be a cost-effective alternative to expanding the patchwork of community-based service organizations. This report should have included a thorough discussion of the pros and cons of building home visiting programs around public health nursing. An alternative would be using the infrastructure of other existing welfare programs.

The report does not distinguish home visiting from case management although it shares certain features of case management, e.g., linking clients to services. These two forms of intervention should be defined and distinguished from each other. For instance, case-management services for at-risk families with children under 2 should be expanded to include systematic home visiting.

The report uses an implicit model of service delivery that can be reasonably characterized as the American "patchwork" of care system. The report does not fully address how to integrate one new service into the existing and somewhat fragmented health care system in the United States. However, the report does raise the possibility that weak effects of these programs may in part be due to fragmentation. Arguably, the weak effects could be due to historical effects outside of program control. If a home visiting program is put into place just as welfare benefits run out or as the last public hospital in town closes its doors, the chances for showing positive program outcomes will be decreased.

The report states that there has not been extensive evaluation of home-visiting programs. Apparently, while a few studies have been methodologically acceptable, many evaluations have not been. Thus, it will be very important to evaluate how well the recommended "design components" actually serve the diverse staff and client populations that will use them in various settings. Therefore, it should be a requirement that programs have an evaluation component, not merely that technical assistance be provided to do evaluations. At some point in the future, a number of well-done evaluations could be reviewed and more firmly-based conclusions regarding effectiveness and cost could be reached.

The report appears to propose home visiting not as a specific service, but as a mechanism for providing services to high-risk populations. These home-based services include coaching, counseling, teaching, some direct health services, and referral to appropriate community resources for additional services. The questions of who visits, what services, and frequency depend upon clear objectives and specific services matched to the target population's needs and to the home visitors' skills and abilities. Home visiting should not stand in isolation and should not be the sole substitute for gaps in crucial health services. Much of the success of home visiting is from connecting families to a wide-array of community services.

The report's findings have important implications for rural areas of the United States where the lack of transportation services make home visiting a key element in ensuring access to health services for disadvantaged families with young children. We also agree that home visiting is an effective component of an early intervention strategy (as it consists of outreach, informing, care coordination, and case management strategies).

GAO Recommendation

The Secretaries of HHS and Education should require federally supported programs that use home visiting to incorporate certain critical program design components for developing and managing home-visiting services. Specifically, the Secretary of HHS should incorporate these program design components when implementing the home-visiting demonstration projects from the MCH Block Grant.

HHS Comment

We concur. The MCH staff of the Health Resources and Services Administration have the responsibility of implementing the recently authorized Omnibus Budget Reconciliation Act of 1989 home visiting demonstration projects. The new authority comes into effect only when the MCH Block Grant reaches $600 million. After further evaluation of the MCH program design components for home-visiting, we will consider their applicability to other programs of the Department.

GAO Recommendation

The Secretaries of HHS and Education should make existing materials on home visiting more widely available through established mechanisms, such as agency clearinghouses.

HHS Comment

We concur. Home-visiting activities will be integrated with the existing clearinghouse activities of the MCH program of the Health Resources and Services Administration (HRSA).

GAO Recommendation

The Secretaries of HHS and Education should provide technical or other assistance to more systematically evaluate the costs, benefits, and potential cost savings associated with home-visiting services.

HHS Comment

We concur. Technical assistance and cost evaluation studies are being done currently under Special Projects of Regional and National Significance (SPRANS) grants funded by the MCH program.

GAO Recommendation

The Secretaries of HHS and Education should give priority to federal demonstration projects designed to (1) meet the multiple needs of target populations, (2) incorporate home visiting permanently into local maternal and child health and welfare service systems, and (3) replicate models that have demonstrated their efficacy.

HHS Comment

We concur to the extent that funding priority for demonstration projects is within existing programs such as the grants funded in HRSA for health care services in the home. Our reservations are based on the questions that remain regarding the efficacy and especially the effectiveness of home visiting intervention programs. Such evaluations must be carefully controlled and use valid scientific measurements. It is critically important that careful evaluation of home visiting intervention strategies for specific outcomes such as infectious disease control, child development or pregnancy not be compromised. Other factors to be analyzed should include those having to do with improved cognitive, intellectual and psychological development of children. Therefore, research and evaluation components should be built into any program such as the one proposed in the GAO report.

GAO Recommendation

The Secretaries of HHS and Education should charge the Federal Interagency Coordinating Council (FICC) with the federal leadership role in coordinating and assisting home-visiting initiatives.

HHS Comment

We do not concur fully because we believe that the FICC was created in principle to bring multiple agencies together to implement the Education for Handicapped Act program. In this program, home visiting, or prenatal and postnatal care, are important but tangential elements. The GAO proposed charge for FICC would add an additional agenda and different focus for this staff group. While such a charge may be of benefit in providing services to preschoolers and their families, the myriad of existing interagency agreements and cooperative agreements may be limiting factors for the FICC.

Matter for Consideration by the Congress

In view of the demonstrated benefits and cost savings associated with home visiting as a strategy for providing early intervention services to improve maternal and child health, especially for high-risk families, the Congress should consider amending title XIX of the Social Security Act to explicitly establish as an optional Medicaid service, when prescribed by a physician, (1) prenatal and postnatal home-visiting services for high-risk women, and (2) home-visiting services for high-risk infants at least up to age one.

HHS Comment

The GAO proposal to amend the Medicaid statute to establish explicitly optional prenatal and postnatal home-visiting services for pregnant women and infants is unnecessary. States essentially have that option now. Home visiting has been a classic public health nursing function since the turn of the century. Under Medicaid, home visiting can be provided under a variety of categories of medical services, including home health service under section 1905 (a)(7), case management services under section 1905 (a)(19) and nurse practitioner services under section 1905 (a)(21). It could also be provided under the general category or any other medical or remedial care under section 1905 (a)(22). As part of State plan administration, home visiting is provided to conduct outreach, informing or administrative case management. In short, there is no statutory barrier to provision of pregnancy-related home visiting services under the current Medicaid law. A greater problem is the fact that, typically, high-risk populations like substance abusers and pregnant teens do not seek care. Without effective outreach, availability of home visiting services will not have a significant impact on Medicaid-eligible, high-risk populations not being served by the program.

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